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THE UNIVERSITY OF ALBERTA
THE TECHNICAL AND VOCATIONAL TRAINING ASSISTANCE ACT:
A SURVEY OF GRANTS PAID TO THE ATLANTIC
PROVINCES FOR THE YEARS 1961-1966

by



HALDANE HARVEY REYNOLDS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled The Technical and Vocational Training Assistance Act: A Survey of Grants Paid to the Atlantic Provinces for the Years 1961-66 submitted by Haldane Harvey Reynolds in partial fulfillment of the requirements for the degree of Master of Education.

ABSTRACT

The purpose of the study was to conduct a survey of the federal grants for three programs paid to the Atlantic Provinces under the terms of the Technical and Vocational Training Assistance Act of 1961. The survey was delimited to the five year period from March 31, 1961 to March 31, 1966. The three programs surveyed were selected on the basis of their importance to secondary education. These were the Capital Expenditures Program; Program 1, Vocational High School and Technical Training; and Program 3, Trade and Other Occupational Training.

Data were obtained from documents prepared by various departments and organizations within the federal government. Supplementary information was gathered from many sources, including reports of the Departments of Education of the Atlantic Provinces. A search was conducted of background literature consisting of books, unpublished reports and periodicals provided by the libraries of the University of Alberta. Other sources were also used.

The survey indicated that the Atlantic Provinces had received a total of 56.7 million dollars in federal grants for vocational education during this period. The Capital Expenditures Program absorbed 38.4 million of this amount, and 9.7 million was expended on Programs 1 and 3.

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CHAPTER I

THE PROBLEM CONSIDERED

I. INTRODUCTION

Although provisions for federal government financial aid to the provinces for technical and vocational education had existed during the previous fifty years,¹ the Technical and Vocational Training Assistance Act (S.C. 1960-61, C.6) passed by the federal government on December 20, 1960, provided a great stimulus to Canadian education, particularly in the field of vocational and technical education. The extent of this stimulus is indicated by the fact that within approximately one year of its operation a total of 105,308 new student places, costing an estimated \$332,829,844 were planned in new schools and additions to existing schools.²

Under the provisions of the British North America Act, education is a provincial responsibility. The Technical and Vocational Training Assistance Act provided the provinces with an opportunity to receive increased financial aid from the federal government for vocational education. A province could obtain this financial assistance from the federal government

¹Acts and Agreements in effect prior to 1960 are listed in Appendix A.

²Department of Labour, Technical and Vocational Education in Canada, Vol. 1, No. 1 (Ottawa: Information Branch, Technical and Vocational Training Branch, Summer, 1962), p. 8.

after signing the Technical and Vocational Training Agreement. This Agreement initially provided for grants for nine training programs, and for capital expenditures. The Apprenticeship Training Agreement allotted funds for apprenticeship training under the same act. The grants provided the provinces with more opportunities for training both youth and adults. Each of the Atlantic Provinces signed the Agreement and received grants.

This study is concerned with an examination of the federal grants received by the Atlantic Provinces. The function of the remainder of this chapter is to:

1. State the purpose of the study,
2. Discuss the delineation of this study,
3. Indicate its importance,
4. Define terms, and
5. Outline the organization of the thesis.

II. THE PURPOSE OF THE STUDY

The purpose of this study is to survey the grants paid to the Atlantic Provinces under the terms of the Technical and Vocational Training Assistance Act for the following three programs.

1. Capital Expenditures Program.
2. Program 1: Vocational High School and Technical Training.
3. Program 3: Trade and Other Occupational Training.

These three programs were selected because of their relevance to secondary education. This study covers the five year period for the fiscal years 1961-62 to 1965-66.

III. DESCRIPTION OF THE STUDY

Research Design

The study was essentially a survey. Material has been obtained from many sources including books, periodicals, studies, and numerous reports from various provincial and federal government agencies. Much of this source material was written in the last decade. Canadian sources were chosen for their relevance to Canadian problems. Sources from the United States and England were chosen as a basis for comparison of philosophies, procedures, and programs for providing vocational and technical education.

Primary references included copies of Annual Reports of the Federal Department of Labour, reports of the Technical and Vocational Training Branch of the Department of Labour, Annual Reports of Provincial Departments of Education, numerous reports from the Dominion Bureau of Statistics, copies of the Technical and Vocational Training Assistance Act with Amendments, and copies of the Agreements under the Act.

Delimitations

This survey was concerned with an examination of those federal grants to the Atlantic Provinces under the terms of the Technical and Vocational Training Assistance Act which were used to support secondary education. The determining criterion in delimiting the study to Program 1, Program 3, and the Capital Expenditures Program was to focus as closely as possible on students of secondary school age.

An examination of Annual Reports of the Departments of Education

of the Atlantic Provinces and other data supports the assumption that the bulk of high school students are within the 15-19 year age group. This age group also corresponds to that used by the federal government both for determining the basis for financial allotments to the provinces for the Vocational High School and Technical Training Program and for the maximum federal contribution available to the provinces at the 75 per cent level for capital expenditures.

Capital Expenditures Program. Under this section of the Act, federal grants for capital expenditures were available to provide training facilities for all the programs. Thus, expenditures under this program were made on programs in addition to those aimed at the secondary school level. Despite this fact, it was decided to include the Capital Expenditures Program in this study because very large expenditures were made under this program for secondary education facilities.

No attempt has been made to provide a comprehensive survey of all vocational education or training programs extant in the Atlantic Provinces. In addition to the federally assisted programs, many other programs of a vocational nature existed at the secondary school level.¹ These programs and others available to young people in the age group used in this survey did not qualify for federal grants and are, therefore, beyond the limits

¹For example see, Dominion Bureau of Statistics, Department of Citizenship and Immigration, Technical and Vocational Training Branch, Enrollment in Vocational Courses, 1965-66 and Number of Completions, Spring, 1965 (Ottawa: Education Division, August, 1966), pp. 3 and 21.

of the present study.¹

Limitations

Since this survey was concerned with federal grants, the data used were compiled from reports of the various federal government agencies concerned.

Use of federal government statistics. Data were supplied by the Technical and Vocational Training Branch of the Department of Labour and the Dominion Bureau of Statistics. However, such federal statistics were limited to those programs for which federal grants were available. For this reason the decision was made not to examine those programs that have been offered and paid for by provincial and/or local financing without federal financial assistance.

Analysis: quantitative but not qualitative. The study was also limited in that an examination of the facilities provided, the programs offered, and the number of student places created with the use of federal grants is a quantitative rather than a qualitative analysis. Some measure of quality is implied in the necessity for the programs to meet the requirements of the Act in order to qualify for federal grants.

¹For example see, Dominion Bureau of Statistics, Directory of Private Business Colleges and Other Privately Owned Vocational Schools, 1965 (Ottawa: Education Division, Vocational Training Section, November, 1966), pp. 3-4 and 11.

Limitations in using Program 3. The inability to differentiate the number of students in Program 3 who were beyond the age limits chosen (15-24) imposed another limitation on the study. Adults who received training under Program 3 were included in the federal statistics. However, since one of the Atlantic Provinces made wider use of Program 3 for secondary education and another later provided much of its vocational education at the secondary level under this program, it was felt that the importance of Program 3 to the study overbalanced this limitation.

Another difficulty experienced in the analysis of Program 3 was that since April 1, 1964, when a new Apprenticeship Training Agreement became effective, the costs of in-school training of registered apprentices were shared under Program 3.¹ These costs, previously listed under apprenticeship, were of necessity included, as the reports do not separate these figures.

Use of Annual Reports of the provinces. A report of the Department of Labour in 1949 stated:

On looking over the reports of the Provincial Departments of Education for the past years, one cannot help but be struck and surprised by the following facts:

1. The scant attention paid to vocational education in very many of these reports.
2. The lack of adequate actual data on the extent and content of vocational education.

¹Department of Labour, Annual Report, 1966 (Ottawa: Queen's Printer, 1967), p. 86.

3. The lack of uniformity in compiling statistics and in defining the terms used.¹

An examination of Annual Reports of the Departments of Education of the Atlantic Provinces since 1950 reveals many variations in the reporting of data. This variation in provincial compilation of statistics and the differences in format and recording of federal contributions were factors in the decision to choose federal statistics as being the most suitable for this study, despite their limitations.

IV. IMPORTANCE OF THE STUDY

An examination of reports of federal government departments and individuals concerned with administering the Technical and Vocational Training Assistance Act indicated that vocational education was regarded as a means to develop the industrial potential of the country.² The study of the grants paid to the Atlantic Provinces is important to indicate how these provinces used the grants to increase their facilities and programs for vocational and technical education.

"In its education investment a country must adopt a balanced program, suited to its own needs and stage of development, or it may run

¹Department of Labour, Vocational Education In Canada (Ottawa: King's Printer, 1949), p. 6.

²For example see, C. R. Ford, "Developments in Canadian Education Services" (address given at Trail, British Columbia, April 23, 1966), (Ottawa: Training Information Services, Technical and Vocational Training Branch), pp. 2-3.

into trouble."¹ The scope and breadth of programs offered under the Technical and Vocational Training Assistance Act (commonly referred to as the TVTA Act), indicate an awareness of this concern. The Atlantic Provinces have not been regarded as the most affluent region in Canada. In recent years great efforts have been made to develop the area industrially and to create more favourable economic conditions.

These provinces have been concerned about economic development. Reports of provincial governments, of the Atlantic Provinces Economic Council, of newspapers from the region, and of various other sources stress this concern and describe efforts made to improve the economy. Provincial and federal governments, numerous organizations, and many individuals have shown an awareness of the need for economic development of the region.

Relationship between Economic Development and Education

The increasing degree of interest in education shown by economists is a comparatively recent development. Wilkinson discusses this interest in the relationship between education and economic growth, the proportion of resources that education should receive, the types of education and training necessary for economic growth, and the most advantageous ways of

¹Frederick Harbison, "Strategies for Investing in People," John W. Hanson and Cole S. Brembeck (eds.), Education and the Development of Nations (Toronto: Holt, Rinehart and Winston, Inc., 1966), p. 148.

utilizing physical and human resources.¹ The Technical and Vocational Training Agreement refers to the dependence of the continued growth of the Canadian economy on the skills and knowledge of the labour force and the urgent requirement for the development of training opportunities for youth who will be entering employment.² This is also relevant to the Atlantic Provinces.

Further support can be found for the theory of the existence of a relationship between industrial development, economic growth, and investment in education. Porter comments as follows:

Educational systems and industrialization have grown together. Industrialization affects the content and the distribution of education, while at the same time the distribution and content of education establishes boundaries for industrial growth. The content of education is affected by the emphasis in industrial societies on the marketability of skills . . . an educational system fails when it does not train people in sufficient quality and quantity for occupational roles.³

In his study of Nova Scotia, Graham states:

Economic improvement depends in very large part upon the knowledge, skill and adaptability of the people. . . . A particularly high priority should therefore be given by the provincial government to achieving excellence in education at all levels and in technical and vocational

¹Bruce W. Wilkinson, Studies in the Economics of Education, Economics and Research Branch, Department of Labour (Ottawa: Queen's Printer, 1966), pp. 1-4.

²Department of Labour, Technical and Vocational Training Agreement (Ottawa: Queen's Printer, 1960).

³John Porter, The Vertical Mosaic (Toronto: The University of Toronto Press, 1965), p. 165.

training.¹

These statements are indicative of the importance of a study concerning the use of federal grants to technical education. It is suggested that where a need exists for technological development, as in the Atlantic Provinces, the study is of particular importance.

In an analysis of interregional differences in manpower utilization and earnings, Denton² compared the Atlantic Provinces with Quebec, Ontario, the Prairie Region, and British Columbia and stated:

The Atlantic Region has a particularly unfavourable set of characteristics. The effect of relatively low basic rates of earnings is reinforced by very high unemployment rates, an unfavourable age structure, and low labour force participation rates . . . the general educational level of the population is lower than in other regions. . . . The over-all disparity of income levels among the regions and especially the gap between the Atlantic Region and the rest of Canada have proved to be surprisingly stable over several decades in the face of marked changes in the fortunes of the national economy.³

In discussing the close association between average income and the level of educational attainment the following quotation was used in a report of the Economic Council of Canada:

Combined with the direct effects of educational levels on average income, there are also important indirect influences. In particular, a relatively poor structure of educational attainment in a region fails to support or attract those industries and activities which increasingly rely upon an educated and skilled work force. Together,

¹John F. Graham, Fiscal Adjustment and Economic Development: A Case Study of Nova Scotia (Toronto: University of Toronto Press, 1963), p. 225.

²Frank T. Denton, An Analysis of Interregional Differences in Manpower Utilization and Earnings (Ottawa: Queen's Printer, 1966), p. 14.

³Ibid., pp. 14-15.

the direct and indirect effects of educational attainment contribute significantly to interregional differences in income.¹

A later report of the Economic Council of Canada contains this statement:

Notwithstanding the prolonged and substantial economic expansion across the whole country, a significant gap has persisted between the Atlantic area particularly and the rest of the country in provision for those public services related to long-term growth. It is especially disturbing that disparities among the provinces in per capita expenditures on education have tended to widen.²

Many other sources examined could be quoted to illustrate efforts to relate economic growth to expenditures on education. Included in these sources are books or articles by Schultz, Vaizey, Wilkinson, Bertram, Harbison and Myers, Conant, and Clark.³ The relationship between education and economic development indicates the importance of a study to survey the use that the Atlantic Provinces made of federal grants for vocational education. This is especially true in a region that has shown concern for economic development.

Use Made of Available Programs

In recent years, the federal government, in co-operation with the provinces, has greatly expanded vocational education and training programs. It is too early to make any over-all assessment of their

¹Economic Council of Canada, "Toward Sustained and Balanced Economic Growth," Second Annual Review (Ottawa: Queen's Printer, December, 1965), pp. 118-120.

²Economic Council of Canada, "Prices, Productivity and Employment," Third Annual Review (Ottawa: Queen's Printer, 1966), p. 258.

³See listing of individual works in Selected Bibliography.

effectiveness in overcoming deficiencies in training. However, it is evident that not nearly sufficient use is being made of certain programs.¹

The Second Annual Review of the Economic Council stated in referring to the Technical and Vocational Training Assistance Act, "At present, there are four relatively under-used programs on the federal statute books."² Pre-employment training for people out of school was one of these. Lack of adequate knowledge by the general public about availability of, qualifications and conditions for enrollment in courses, scarcity of qualified vocational teachers, inadequate information by provincial and local educational authorities with regard to developing and future manpower needs, and failure to implement programs because many authorities would be involved and the responsibility for initiation of programs was often not clear, were stated as causes contributing to this situation.³

Thus, the survey is also important to determine if the Atlantic Provinces made use of all available grants for vocational education programs at the secondary school level.

Termination of Technical and Vocational Training Assistance Act

Although the date of termination of the act was March 31, 1967, the

¹Economic Council of Canada, Economic Goals for Canada to 1970, First Annual Review (Ottawa: Queen's Printer, 1965), p. 162.

²Economic Council of Canada, Toward Sustained and Balanced Economic Growth, Second Annual Review (Ottawa: Queen's Printer, 1965), p. 182.

³Ibid., pp. 182-183.

deadline was extended to allow provinces that did not use their allocations for capital expenditures to do so. Analysis of the expenditures made during the first five years of the Act provides a description of how the Atlantic Provinces made use of what was then an ongoing federal support program in technical and vocational education. History has proven that ". . . the challenge of the future will be met only if we analyze the successes and failures of the past."¹ Accordingly, this survey should provide understandings important to decision makers in the future.

V. DEFINITION OF TERMS

Technical and Vocational Education

Technical and vocational training means any form of instruction, the purpose of which is to prepare a person for gainful employment in any primary or secondary industry or in any service occupation or to increase his skill or proficiency therein, and, without restricting the generality of the foregoing, includes instruction for that purpose in relation to any of the following industries or occupations: agriculture, forestry, fishing, commerce, construction, manufacturing, transportation or communications, or generally, any primary or secondary industry or service occupation requiring an understanding of the principles of science or technology and the application thereof, except where such instruction is designed for university credit.²

Stated briefly, technical and vocational education refers to any

¹C. L. Greiber, "New Horizons for Trade and Industrial Education," Industrial Arts and Vocational Education, Vol. 52, No. 1 (January, 1963), p. 19.

²Department of Labour, op. cit., p. 2; and also cited in 9 Elizabeth II, An Act Respecting Technical and Vocational Training Assistance, Chapter 6 (Ottawa: Queen's Printer, 1961), pp. 1-2.

form of instruction, except courses for university credit, that is designed to prepare a person for employment or to increase his skill in any of the primary, secondary, or service industries. Thus, its purpose is to prepare for employment, increase skill in employment, or retrain for changing demands of employment.

Secondary Education

For the purpose of this survey, secondary education was considered to be education given in full-time day classes, the purpose of which was to prepare students at a grade level above that of Grade VIII for matriculation, for entrance into other institutions or programs providing training, or for entrance directly into the world of work. The age group 15-19 years was used as a basis for examining secondary education in academic, vocational, or comprehensive high schools, and the age group 15-24 years was used for those in trade training classes.

The Act

This term refers to the Technical and Vocational Training Assistance Act (S.C. 1960-61, C.6), federal government legislation of December, 1960. The Act became effective April 1, 1961, with March 31, 1967, the date of termination. It is referred to throughout this study as the TVTA Act.

The Agreement

This term refers to the Technical and Vocational Training Agreement. This Agreement, as authorized by the Act, between the federal government

and the government of any province of Canada, specified programs available, and conditions under which federal grants would be paid to the provinces. It became effective April 1, 1961, or thereafter when signed by a provincial government. March 31, 1967, was the date of termination.

The Atlantic Provinces

New Brunswick, Newfoundland, Nova Scotia, and Prince Edward Island are commonly referred to as the Atlantic Provinces.

VI. LIST OF REMAINING CHAPTERS

The balance of the thesis is organized as follows:

- Chapter II Background Data
- Chapter III Survey of Capital Expenditures Program
- Chapter IV Survey of Program 1: Vocational High School Training
- Chapter V Survey of Program 3: Trade and Other Occupational Training
- Chapter VI Major Findings: Conclusions: Recommendations for Further Study

VII. CHAPTER SUMMARY

This study is a descriptive survey of the federal grants paid to the Atlantic Provinces under the terms of the Technical and Vocational Training Assistance Act for vocational education at the secondary school level. The Capital Expenditures Program, Program 1, and Program 3 were selected for the survey.

The study covered the five year period April 1, 1961, to March 31, 1966, and was subject to those limitations arising from the use of

federal government statistics. The study was concerned with grants paid to support educational programs; consequently no measure of quality other than the requirements of the Act and the Agreement was used. Vocational courses at the secondary level that are not eligible for grants were not included.

The relationship between education and economic growth was used to indicate the importance of the study for a region that has shown concern about economic development. The study surveyed the grants paid in order to determine if the Atlantic Provinces made use of all available federal grants. This information was considered important to aid in an interpretation of the past, an understanding of the present, and a preparation for the future. The organization of the thesis has been outlined and a definition of terms provided.

CHAPTER II

BACKGROUND DATA

I. INTRODUCTION

Laws and institutions must go hand in hand with the progress of the human mind . . . as new discoveries are made, new truths discovered and manners and opinions change . . . institutions must advance also to keep pace with the times.¹

An example of effort to keep pace with the times was the involvement of the federal government in vocational and technical education.

Federal involvement in the field of education (a provincial responsibility under the British North America Act) was justified on the basis of (a) the need of an industrial nation for an adequate supply of skilled workers, (b) provision of equality of education opportunity, and (c) the high cost to local and provincial authorities of providing adequate training programs and facilities. Since 1919, except for the period from 1929-1937, the federal government has played an increasingly important role in this field.²

The use of grants under the TVTA Act by the Atlantic Provinces for vocational education at the secondary school level can be more easily interpreted and better understood when background information is available to provide perspective.

¹Thomas Jefferson, cited in Education for a Changing World of Work: Report of the Panel of Consultants on Vocational Education (Washington: United States Department of Health, Education, and Welfare, 1963), p. 215.

²Donald Glendenning, "A Review of Federal Legislation Relating to Technical and Vocational Education in Canada" (Ottawa: Technical and Vocational Training Branch, Department of Labour, July, 1965), p. 9. (Mimeographed.)

The purpose of this chapter is to describe briefly the TVTA Act with particular reference to the three programs examined in detail in this study. In addition, some background is given in regard to the use of federal grants under the TVTA Act by the Atlantic Provinces.

II. THE TECHNICAL AND VOCATIONAL TRAINING ASSISTANCE ACT

The Technical and Vocational Training Assistance Act (S.C. 1960-61, C6), federal government legislation of December, 1960, was a development from, a continuation of, and an extension to, preceding and existing federal legislation for vocational training. Several federal Acts and Agreements preceded the TVTA Act.¹ Federal financial assistance for vocational education in 1960 was provided by federal-provincial Agreements operating under The Vocational Training Co-ordination Act of 1942. These Agreements were replaced² by the Technical and Vocational Training Agreement, effective April 1, 1961, or thereafter when signed by a province. The date of expiry was March 31, 1967. The Apprenticeship

¹For a discussion of these Acts and Agreements see, for example, Department of Labour, Vocational Education in Canada (Ottawa: King's Printer, 1949), pp. 8-11 and 23-31; and Donald Glendenning, "Impact of Federal Financial Support on Vocational Education in Canada" (unpublished Doctoral dissertation, Indiana University, 1964), pp. 15-78.

²The Act authorized continuation of any projects for training originating under The Youth Training Act, 1939, and continued in effect under The Vocational Training Co-ordination Act, 1942, largely on a matching grant financial basis. Existing Agreements under this latter Act were to continue in force. See Sections 5 (1) (2) and 14 of the TVTA Act, pp. 4 and 7.

Training Agreement in existence at that time was continued. All programs in the field of vocational education for which federal grants could be paid to the provinces were thus grouped under this new Act administered through two Agreements available to the provinces. The Act was designed to broaden the scope of vocational and technical training, to provide stimulation through increased financial aid, and in some cases, to remove some of the restrictions imposed by quota allotments for federal grants under preceding Acts and Agreements. A meeting of federal officials with representatives of the provinces, prior to the passage of the Act, indicated that, in general, it would be favourably received.

III. PROVINCIAL AUTONOMY AND THE TVTA ACT

Education, in so far as governments are concerned, is a provincial responsibility and, since vocational training is generally regarded as an integral part of the established educational system in each province, the federal Department of Labour . . . has relied on the provinces to provide suitable training for all purposes as set forth in the Act.¹

The provinces were free under the Agreement to select those programs desired from among the ten initial ones (nine "programs" and a capital expenditure plan). Limits by the federal government on the use of each program under the Agreement were subject only to conditions of the Agreement.

. . . Each province has been free under the Agreement to direct

¹ Department of Labour, Annual Report, 1962 (Ottawa: Queen's Printer, 1963), p. 75.

its assisted building program to meet its most pressing training requirements. As a particular need for one type of training facility is met, the province can turn its attention to other types. Long-term planning by the provinces embraces a variety of projects.¹

Glendenning, in referring to the Vocational Schools' Assistance Agreement (Order-in-Council P.C./648, March 8, 1945), which was signed by each of the provinces in 1945, stated, "The Order-in-Council stipulated that the agreement include a clause adequately protecting provincial autonomy in the field of education and in the control and administration of vocational schools."² This clause is found in Section 8 of the Agreement referred to,³ and the policy it established has been continued. Thus, it would appear that the federal government made efforts to preserve provincial control.⁴

¹Department of Labour, Annual Report, 1962 (Ottawa: Queen's Printer, 1963), p. 77.

²Glendenning, "A Review of Federal Legislation Relating to Technical and Vocational Education in Canada" (Ottawa: Technical and Vocational Training Branch, Department of Labour, July, 1965), pp. 20-21. (Mimeographed.)

³Department of Labour, "Vocational Schools' Assistance Agreement," Vocational Education In Canada (Ottawa: King's Printer, 1949), pp. 90-93.

⁴Bryce argues that certain aspects of the TVTA Act were very directive. See, Robert C. Bryce, "The Technical and Vocational Training Assistance Act of 1961-67: An Historical Survey and Documentary Analysis" (unpublished Doctoral dissertation, University of Alberta, Edmonton, 1970), pp. 368-373; and, Hodgson, in referring to vocational training, stated, "In the early 1960's the Federal-Provincial Agreement concerning vocational education, brought the Federal government into action as a curriculum authority," see, Ernest Daniel Hodgson, "The Nature and Purposes of the Public School in the Northwest Territories (1885-1905), Alberta (1905-1963)" (unpublished Doctoral dissertation, University of Alberta, Edmonton, 1964), pp. 335-341.

Advisory Committees

In matters relating to technical education, the federal government maintained co-operation and consultation with the provinces through the development of advisory committees. These included the National Technical and Vocational Training Advisory Council,¹ the National Advisory Committee on Technological Education, the Apprenticeship Training Advisory Committee, and the Interprovincial Vocational Correspondence Courses Committee.² The Atlantic Provinces were represented and thus had the opportunity to advocate policies desired and to object to those policies they opposed.

IV. FINANCIAL HIGHLIGHTS OF THE TVTA ACT

The Agreements under the TVTA Act (the Technical and Vocational Training Agreement and the Apprenticeship Training Agreement) listed the programs and identified the conditions under which federal grants would be paid. The TVTA Agreement³ specified cost-sharing arrangements for each of the nine⁴ initial programs and for capital expenditures. It could,

¹Authority to establish this Council was provided by the TVTA Act, Section 9, pp. 5-6.

²Dominion Bureau of Statistics, Survey of Vocational Education and Training, 1961-62, 1962-63 (Ottawa: Education Division, Vocational Training Section, December, 1965), pp. 10-11.

³The term "Agreement" is used to refer to the TVTA Agreement. Reference to the Apprenticeship Training Agreement will be specified.

⁴A tenth program, Manpower Requirements and Training Research, was authorized by Order-in-Council, February 4, 1965. See Appendix B.

except for approved capital expenditures, be terminated by either signatory on six months notice. This financial assistance was subject only to limits voted by Parliament, and except in the case of Program 1, the Vocational High School Training Program, and Program 9, the Student Aid Program, was not limited initially by a quota for each province.¹ The federal government agreed to share 50 per cent of the approved operating costs of Program 1 up to a maximum allocation of \$15,000,000. The maximum annual federal contribution was limited to \$3,000,000. An initial payment of \$30,000 was made to each province after the Agreement was signed. The annual allotment was based on the population in the 15-19 age group using 1961 Census figures for each province.

Other programs were originally "open-ended" as the federal grant was based on provincial operating expenditures for approved programs. The federal contribution varied from 50 to 75 per cent, with a few exceptions. Program 3 was an example of this "open-ended" type in which the federal government paid 50 per cent of the provincial cost of approved programs with no prescribed maximum contribution.

The original legislation provided for a federal government contribution of 75 per cent of the cost of approved capital expenditures incurred by March 31, 1963.² Provision was made for cost-sharing to revert to a 50-50 basis after this date. This feature of the TVTA Act

¹Department of Labour, Annual Report, 1962 (Ottawa: Queen's Printer, 1963), p. 76.

²Ibid.

encouraged the provinces to take immediate action in regard to capital projects for technical and vocational education. However, certain difficulties emerged and amendments followed.

. . . a number of the provinces were unable to take full advantage of the 75 per cent federal contribution towards the capital costs of approved projects completed before March 31, 1963, for the reason that they were in the process of studying educational needs when the Act was passed, and were not in a position to undertake their building programs soon enough to qualify for the 75 per cent reimbursement. To level out these inequities, an amendment to the Act was passed in 1963
 . . . ¹

Although the factor of the time limit for cost-sharing at 75 per cent was extended for the life of the Act by these amendments, a maximum was established for each province for capital grants at this rate. This amount was based on a provincial expenditure of 480 dollars per person in the 15-19 age group as determined by the 1961 Census. After this total was paid to a province for approved expenditures at the 75 per cent cost-sharing formula, the cost-sharing then reverted to a 50-50 basis.

V. PROGRAMS SURVEYED: AN OVERVIEW

Certain programs authorized by the Agreements under the TVTA Act are not within the scope of this survey. A list of all programs under the Agreement, with a brief summary of the terms of cost-sharing, is provided in Appendix B. The following programs are those surveyed in this study.

¹Dominion Bureau of Statistics, op. cit., pp. 9-10.

Program 1: Vocational High School and Technical Training

This category included programs or courses given as an integral part of high school education in the regular secondary schools, including technical, vocational or composite high schools eligible for federal support. At least one-half of the school time of these full-time courses had to be spent in instruction of an occupational training nature. Co-operative training programs in which students spent a minimum of one-half time on the job were also included.

Program 3: Trade and Other Occupational Training

This program was designed to provide pre-employment training and upgrading or retraining of persons over the compulsory school attendance age who had left elementary or secondary school. Training could be full-time, part-time or as otherwise approved, and was designed to develop or to up-grade occupational competence. Duration of training varied from short courses of five days to courses of two years in length.

Capital Expenditures Program

This program made possible federal grants for approved training facilities for all programs covered by the Agreement and the Apprenticeship Training Agreement. It provided the vehicle for the federal government to make grants to the provinces for capital expenditures incurred in the cost of approved construction. Also shareable, were approved costs for purchase of machinery and equipment, and the cost of purchase, addition to, or alteration of buildings or physical plant. Initially no financial

limits were imposed; however, the federal government later established time limits for a cost-sharing ratio of 75 per cent. The cost-sharing ratio was to be 50 per cent for projects not meeting the time limit imposed. Amendments to the Act later extended the time limits at the 75 per cent formula for the life of the Act, but specified a maximum amount for grants at this rate. The federal government then paid 50 per cent of approved capital costs in excess of this amount.

VI. FEDERAL AID AND PROVINCIAL PARTICIPATION

Under the provisions of the British North America Act, education is a provincial responsibility.¹ The federal government paid the grants to the provinces, subject to the conditions imposed by the Act and by the Agreements. The provinces were responsible for the administration of the programs.

Federal aid to education has been the subject of much controversy.² Reaction to federal government participation in education has been affected

¹The BNA Act, 1867, Section 93 specifies the jurisdictions of the provincial and federal governments in respect to education. The control of education was placed under the provincial legislatures, subject to certain specified conditions of the Constitution. For a discussion of this topic, see Peter Frank Bargaen, The Legal Status of the Canadian Public School Pupil (Toronto: The MacMillan Company of Canada Limited, 1961), pp. 7-11.

²For a discussion of points of controversy, parliamentary debates, and the passing of the TVTA Act by The Canadian Parliament, see Bryce, op. cit., pp. 187-207.

by social, political, economic, geographic, and religious factors.

Included among these are: the citing of the authority of the British North America Act; the tradition of provincial autonomy in education; the jealous guarding of traditions, customs, and language by some provinces; denominational considerations; and the attitude of provincial politicians and citizens in general toward intervention by the federal government in provincial education. The possibility that these factors had influenced the decisions of federal and provincial governments in the use of federal grants for vocational education at the secondary school level was considered.

An examination of periodicals, reports of various organizations, and committees revealed no significant opposition in the Atlantic Provinces to the use of federal funds for vocational education. Thus, it appears that the governments of the Atlantic Provinces had no overt philosophical, constitutional, or political arguments to overcome in making use of the federal grants available under the TVTA Act.

The story of federal aid for vocational education is full of federal-provincial co-operative endeavour and of federal-provincial conflict. Nonetheless, programs have developed, federal money has stimulated provincial action and federal participation in this¹ form of education, however it is justified, is clearly established.

The federal funds available for a wide range of programs and facilities set the stage for an unprecedented expansion of vocational

¹Wilbert Nelson Toombs, "Federal Aid in Canada, 1867-1960: An Analysis of Parliamentary Debates on Federal Financial Participation in Education in Canada" (unpublished Doctoral dissertation, University of Alberta, Edmonton, 1966), p. 33.

and technical education in Canada.¹ In referring to the impact of the TVTA Act and the Federal-Provincial Agreement implementing legislation, Ford states, "The late G. Fred McNally of Alberta described it as the most significant thing that had happened in the field of education in this century."² The use of these grants by the Atlantic Provinces is surveyed in the next chapter.

Political Considerations and Federal Aid

It must be assumed that in a democracy the opinions of the electors and the needs of the nation influence the decisions of politicians and thus, affect legislation. An analysis of participation in discussions on federal aid to education by representatives of the Maritime Provinces³ in the Canadian House of Commons and Senate is shown in Table I. This table indicates that in the period 1946 to 1960, during which federal legislation having the greatest influence on vocational education was enacted, including the Vocational and Technical Training Assistance Act, opinions expressed by Maritime representatives were twenty-four in favour and four against federal aid to education. It would thus appear that the Atlantic Provinces had no history of

¹C. R. Ford, "Developments in Canadian Education Services" (address given at Trail, British Columbia, April 23, 1966), (Ottawa: Training Information Services, Technical and Vocational Training Branch), pp. 2-5.

²Ibid., p. 2.

³Toombs, op. cit., pp. 290-292 and 359-364.

PARTICIPANTS IN DISCUSSIONS ON FEDERAL AID TO EDUCATION IN
THE CANADIAN HOUSE OF COMMONS AND SENATE FROM 1867 TO 1960
REPRESENTATIVES OF THE MARITIME PROVINCES¹

	<u>1867-1896</u>		<u>1896-1945</u>		<u>1946-1960</u>		<u>Total</u>	
	For	Against	For	Against	For	Against	For	Against
Constitutional implications of federal aid	3	6	1	1	4	2	8	9
The issue of minority rights	3	3	-	-	2	-	5	3
The development of the nation's human resources	4	1	-	-	5	-	9	1
The relationship of federal aid to local control of education	-	1	1	1	7	2	8	4
The concern for a developing Canadian nation	1	-	-	-	6	-	7	-
TOTALS	11	11	2	2	24	4	37	17

¹Nova Scotia, New Brunswick and Prince Edward Island were known as the "Maritime Provinces". When Newfoundland became a Canadian province the term "Atlantic Provinces" was used.

Source: Compiled from data in Wilbert Nelson Toombs, "Federal Aid in Canada, 1867-1960: An Analysis of Parliamentary Debates on Federal Financial Participation in Education in Canada" (unpublished Doctoral dissertation, University of Alberta, Edmonton, 1966), pp. 290-292 and 359-364.

political opposition to federal initiatives in education.¹

VII. CHAPTER SUMMARY

The information in this chapter provides a perspective for the survey of the use of TVTA Act funds by the Atlantic Provinces.

A brief overview of the Act, the Agreement, and the programs to be studied has been related to financial and political implications concerning the use of the grants. Amendments to the Act extended the time limit for the 75 per cent cost-sharing, and thus made it possible for "late starters" to enjoy the original financial benefits of the Capital Expenditures Program.

¹ Bryce, op. cit., reported that the TVTA Act "was put to the vote and, without a single recorded 'Nay' was passed by the House on December 12, 1960." p. 200.

CHAPTER III

ANALYSIS OF CAPITAL EXPENDITURES PROGRAM

I. INTRODUCTION

The federal capital grants for vocational and technical education which were available to the Canadian Provinces under the terms of the TVTA Act were unprecedented in magnitude.¹ The purpose of this chapter is to survey the extent to which the Atlantic Provinces obtained grants for the Capital Expenditures Program under the TVTA Act. Comparisons are made with other provinces in order to give perspective to the actions of the Atlantic Provinces.

In referring to an appraisal of the technical and vocational training program, Dr. C. R. Ford, the Director of the Technical and Vocational Training Branch at Ottawa, stated he "favoured examination of the total program with comparisons on a province by province basis."² The basis on which capital grants were paid is discussed and tables provided to show the actual federal capital grants paid to the Atlantic Provinces.

¹For example see, Dean H. Goard, "Current Developments in Canadian Technical and Vocational Education," Phi Delta Kappan, Vol. 46, No. 8, (April, 1965), 395.

²National Technical and Vocational Training Advisory Council, "Minutes of Tenth Meeting," (November 17-18, 1965), p. 20.

II. CAPITAL GRANT STRUCTURE

As a means of assisting the provinces in providing new and improved facilities for all programs under the Agreements, the federal government agreed to reimburse each province for approved capital expenditures. These included the cost of approved construction, purchase, addition or alteration of buildings, or physical plant, and approved machinery or equipment.¹ Further details concerning additional benefits, prior approval for shareable capital expenditures, reporting on programs (as required), financial arrangements, and non-shareable expenditures were outlined in the Agreement.²

According to the terms of the original Agreement, the federal financial contribution was at the rate of 75 per cent of approved costs of buildings completed and equipment delivered before April 1, 1963, and 50 per cent thereafter. During this period and until December, 1963, the program was "open-ended".³ This state of affairs did not persist for long.

To make sure that action would be swift, a time limit was set: all projects were to be near completion by March 31, 1963. This time restriction resulted in feverish planning, penalty clauses in contracts

¹Technical and Vocational Training Agreement (Ottawa: Training Information Service, Technical and Vocational Training Branch, 1966), pp. 9-10. (Office consolidation.)

²Ibid., pp. 9-13.

³The term "open-ended" is used in this survey to describe programs under the TVTA Act for which the federal government placed no maximum limit on expenditures.

and other undesirable features. But it undoubtedly speeded up the building of training facilities. . . . Owing to the fact that some provinces were slow in "getting off the ground" the federal government has decided to amend the act and extend the expiry date to March 31, 1967. This means that all provinces will be enabled to take advantage of the generous federal assistance.¹

Specifically, the amendments were as follows:

Early in 1963 this /time limit of March 31, 1963 for 75 per cent federal sharing/ was amended by agreement between the provinces and the federal government to extend the date by six months to October 1, 1963. This extension of time applies to building contracts let by provinces prior to April 1, 1963, and work completed prior to October 1, 1963, and to equipment purchased prior to April 1, 1963, and installed prior to October 1, 1963. The amendment provides additional time for the provinces to get underway necessary projects delayed in the planning stage.²

Another amendment to the TVTA Act in November, 1963, again extended the time limit for the 75 per cent cost-sharing. It provided that the federal government could pay above the basic 50 per cent an additional

. . . twenty-five per cent of the capital expenditure incurred by the province on training facilities before such date, not later than March 31, 1967, as may be specified in the agreement made under this section between the Minister and the province.³

Thus, again, as in previous federal government legislation for

¹H. T. Coutts and B. E. Walker, G. Fred, The Story of G. Fred McNally (Don Mills: J. M. Dent and Sons (Canada) Limited, 1964), p. 113.

²"Canada--Report on Educational Developments, September 22, 1962--June 23, 1963," Canadian Education and Research Digest, Vol. 3, No. 2 (Toronto: Canadian Education Association, 1963), 71.

³The House of Commons of Canada, Bill C-105: An Act to Amend the Technical and Vocational Training Assistance Act (Ottawa: Queen's Printer, 1963), p. 2.

vocational and technical education,¹ the incentive intended through the stipulation of a time limit for payment of grants was removed.² Some provinces acted quickly in providing facilities, and obtained their grants. Extension of the time limit for 75 per cent cost-sharing prevented others, including some Atlantic Provinces, from losing grants. The extension of the time limit of the 75 per cent cost-sharing by the federal government obviously was beneficial to those Atlantic Provinces that had moved slowly in providing facilities.

In December, 1963 a further change in the TVTA Act necessitated amendments to the Agreement. Federal sharing was set at the 75 per cent rate for approved capital expenditures until the federal contribution payable to each province reached an amount equal to \$480 for each person in the 15-19 age group inclusive, residing in the province. 1961 Census data were used. After this amount was reached, the rate would be 50 per cent for the life of the Agreement, at which rate the program was still "open-ended".

¹For examination of comprehensive reviews of federal legislation for vocational education see Robert C. Bryce, "The Technical and Vocational Training Assistance Act of 1961-67: An Historical Survey and Documentary Analysis" (unpublished Doctoral dissertation, University of Alberta, Edmonton, 1970), pp. 51-123; and Donald Ernest Malcolm Glendenning, "Impact of Federal Financial Support on Vocational Education in Canada" (unpublished Doctoral dissertation, Indiana University, 1964), pp. 31-81.

²For a discussion of the "time-limit" factor in the 75-25 per cent sharing, and its effect, see Bryce, op. cit., pp. 184-185 and 375-376.

This amendment in December, 1963, was the first provision in the agreement for any maximum figure in the Capital Expenditures Program. These changes can be summarized as follows:

SUMMARY OF COST SHARING

	Basic Cost Sharing	Limits	Additional Cost Sharing	Time Limits	Grant Limit
<u>Agreement</u> 1961	75%	<u>Time</u> March 31, 1963	50%	March 31, 1967	none
<u>Amendments</u> (Time Extensions)	75%	<u>Time</u> October 1, 1963	50%	March 31, 1967	none
(Financial) ¹	75%	<u>Dollars</u> until total federal contribution reached was (480) x (number 15-19 population), or, <u>Time</u> March 31, 1967	50% (If maximum in previous column reached prior to March 31, 1967)	March 31, 1967	none

¹See Bill C-105 op. cit., p. 2. An additional 25 per cent could be paid (i.e. 100 per cent) for expenditures under the Agreement for the purpose of providing a technical and vocational training program for unemployed persons.

It is significant to note that by April 30, 1963, the date on which the federal cost-sharing rate of 75 per cent was scheduled to terminate, the province of Newfoundland had obtained approval for TVTA 75-25 capital funding to the order of \$480 per 15-19 year old. This amount was the highest among the provinces and was used as the basis for calculating the 75-25 allocation to the provinces. TVTA grants to the Atlantic jurisdictions were as follows:¹

TVTA CAPITAL GRANTS APPROVED
APRIL, 1961, TO MARCH 31, 1963

Provinces	Per 15-19 Year Old	Rank
Newfoundland	\$ 480	1
Ontario	458	2
Alberta	374	3
Prince Edward Island	233	4
British Columbia	121	5
Saskatchewan	113	6
Nova Scotia	112	7
New Brunswick	90	8
Manitoba	70	9
Quebec	51	10

¹Bryce, op. cit., p. 234 and pp. 253-54.

The Agreement stipulated that the federal Minister of Labour could reject all or part of any capital expenditure requested by a province. Research for this study revealed no instance of the rejection of capital projects put forward by the Atlantic Provinces. It would thus appear that the federal government did not play any direct role in limiting funds available to the Atlantic Provinces under the provisions of the TVTA Act.

III. RELATIVE PRIORITIES FOR EXPENDITURE ON EDUCATION

As a part of this survey of the capital grants paid to the Atlantic Provinces, it was useful to obtain some concept of the priority which these provinces placed on expenditures for education. The implication is that the relative position in the scale of priorities given to education may have influenced the use of federal capital grants for education at the secondary school level.

Table II shows a province-by-province rating of expenditure categories in which education is compared with other major provincial expenditures. The table shows only two provinces in which the rank orders of expenditures on education exceeded any other category of expenditures. "In every other province education expenditures rank second, with the exception of New Brunswick and Nova Scotia, where education ranks fourth and third respectively."¹ These data are relevant in that they indicate

¹J. H. M. Andrews and S. M. Hosein, "What is Your Province's Educational Effort?" School Administration, (September, 1966), 45.

TABLE II

PROVINCIAL EXPENDITURE ON EDUCATION RANKED
WITH OTHER SERVICES 1961-62^a

Provinces	Education	Health and Welfare	Natural Resources	Other	Transportation
Newfound- land	2	1	5	4	3
Prince Edward Island	2	3	5	4	1
Nova Scotia	3	2	5	4	1
New Brunswick	4	2	5	3	1
Quebec	1	2	4	5	3
Ontario	2	1	5	4	3
Manitoba	2	1	4	5	3
Saskatchewan	2	1	4	5	3
Alberta	1	2	4	5	3
British Columbia	2	1	5	4	3

^aEach province is ranked according to the amount of its expenditure on each of the categories listed.

Source: J. H. M. Andrews and S. M. Hosein, "What is Your Province's Educational Effort?" School Administration (September, 1966), p. 45.

provincial priorities for education in the first year of the Technical and Vocational Training Assistance Act, April 1, 1961 to March 31, 1962. It may be assumed that such priorities might have influenced the use of these grants.

IV. ANALYSIS OF GRANTS PAID

After December, 1963, the allotment for each province at the 75 per cent cost-sharing basis was based on the population of the 15-19 age group. Table III shows provincial populations and allotments. In relation to all provinces of Canada, the allotments for Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick rank 9, 10, 7, and 8 respectively.

Table IV shows the payments made to each of the Atlantic Provinces for the period 1961-62 to 1965-66. It also shows provincial allotments at the 75 per cent cost-sharing formula, and the percentage of the allotment used by each province for this period. The table shows that the greatest federal contribution to Newfoundland was in the fiscal year 1962-63; to Prince Edward Island and Nova Scotia in the year 1963-64; and to New Brunswick in the year 1964-65. Additional data indicate the speed with which these provinces acted to use available federal grants for increasing educational facilities. In Table IV it may be noted that by April 30, 1963, payments to the Atlantic Provinces (in thousands of dollars) were as follows: Newfoundland \$15,613.5; New Brunswick \$2,672.1; Nova Scotia \$3,040.9; and Prince Edward Island \$905.7. The percentages that these figures represent of the total grants paid to the Atlantic Provinces are

TABLE III
FEDERAL ALLOTMENTS FOR CAPITAL GRANTS

Province	Column 1 DBS Census ^a 1961 15-19 Age Group	Column 2 Maximum Contribution at 75% ^b Col. 1 x \$480 ^c	Rank
Newfoundland	\$ 43,829	\$ 21,037,920	9
Prince Edward Island	8,875	4,260,000	10
Nova Scotia	64,239	30,834,720	7
New Brunswick	53,514	25,686,720	8
Quebec	467,426	224,364,480	1
Ontario	436,883	209,703,840	2
Manitoba	70,808	33,987,840	6
Saskatchewan	72,864	34,974,720	5
Alberta	99,004	47,521,920	4
British Columbia	112,653	54,073,440	3
TOTALS	\$1,430,095	\$686,445,600	

^aCompiled from Technical and Vocational Training Agreement, Government of Canada: 1961 Census of Canada, Series 1.2, Population Bulletin 1.2-2, Catalogue 92-542, (Ottawa: Dominion Bureau of Statistics).

^bProvince exceeding this amount would be reimbursed at 50 per cent of approved expenditures instead of at 75 per cent.

^cQuota established by amendment to Agreement, December 1963. See Annual Report of Department of Labour, 1964, p. 18.

TABLE 1V

CAPITAL EXPENDITURES PROGRAM--PAYMENTS TO ATLANTIC PROVINCES

Capital Expen- ditures (Total Payments) Claims Paid In:	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick
1961 to April 30, 1962	\$ 2,681,397.44	\$ 80,077.99	\$ 433,112.34	\$ 818,978.50
1962 to April 30, 1963	12,932,085.22	825,666.07	2,607,735.95	1,853,129.98
1963-64	4,920,786.41	1,519,948.97	3,583,814.14	1,564,990.65
1964-65	311,578.25	148,023.56	969,242.46	1,858,200.99
During 1965-66	327,380.50	66,993.70	547,101.09	303,496.17
TOTALS	\$ 21,173,227.82	\$ 2,640,710.29	\$ 8,141,005.98	\$ 6,398,796.29
Maximum Federal contribution at 75% (based on \$480 per capita 15-19 age group)	21,037,900.00	4,260,000.00	30,834,700.00	25,686,700.00
Per cent allotment used (at 75% cost-sharing)	100.6	62.0	26.4	24.9

Source: Department of Labour, Annual Reports for the Fiscal Years Ending March 31, 1962
to 1966, (Ottawa: Queen's Printer).

as follows:¹ Newfoundland 73.3 per cent; New Brunswick 41.8 per cent; Nova Scotia 37.4 per cent; and Prince Edward Island 34.3 per cent. Analysis of reasons for either haste or delay in using grants lies beyond the scope of this study.

Grants Paid and Projects Approved

Under the terms of the Agreements with the provinces prior approval had to be obtained from the federal government for projects designated as eligible to receive cost-sharing funds. Thus, it was possible for a province to have a federal commitment for funds far in excess of actual receipts for a given fiscal year. Table V shows variations resulting from this factor. Grants paid and projects approved for the period under study are listed.

A comparison of rank orders in Table V shows two changes in rank, only one of which is related to the Atlantic Provinces. Nova Scotia ranked seventh in grants received and eighth in grants approved. Although, at times during the period surveyed greater variations may have existed, the logical conclusion is that for the five year period the rank order of the Atlantic Provinces, when compared with all Canadian Provinces for grants approved for capital projects, corresponds with that for grants paid. This statement holds true with the single exception of Nova Scotia, which ranks lower in grants approved.

¹Calculations were made using grants expressed in thousands of dollars.

TABLE V

FEDERAL CAPITAL GRANTS AND TOTAL APPROVED FEDERAL CONTRIBUTIONS
APRIL 1, 1961 to MARCH 31, 1966

Provinces	Grants Paid ^a	Rank	Grants Approved ^b	Rank
Newfoundland	\$ 21,173,228	5	\$ 21,362,482	5
Prince Edward Island	2,640,710	10	2,807,094	10
Nova Scotia	8,141,006	7	8,529,631	8
New Brunswick	6,398,796	9	7,309,688	9
Quebec	82,974,766	2	117,142,314	2
Ontario	234,869,564	1	300,959,651	1
Manitoba	6,439,198	8	11,780,367	7
Saskatchewan	9,332,625	6	18,552,414	6
Alberta	51,618,259	3	78,476,005	3
British Columbia	31,897,681	4	52,430,228	4

^aCompiled from Department of Labour, Annual Reports, Years 1961 to 1966 (Ottawa: Queen's Printer).

^bNational Advisory Council on Technical and Vocational Training, "Minutes of Eleventh Meeting," (May 19-20, 1966), Appendix B, pp. B-1 to B-18. This same table is listed under Department of Labour, "Estimated Federal Contribution," Annual Reports, 1966 (Ottawa: Queen's Printer, 1966), p. 71.

Educational significance. Despite discussions as late as 1965 in some Atlantic Provinces relevant to plans for capital expansion, Table V shows that grants had not been approved for any degree of expansion great enough to change rank orders of the Atlantic Provinces in any of these provinces except in Nova Scotia. Increases in grants approved for capital projects show comparatively small differences from grants paid. Limited expansion was, however, indicated for additional educational facilities under the Act, at that time, for the Atlantic Provinces. The greatest increase was in New Brunswick, and this was less than one million dollars.

This comparison of grants received and projects approved shows comparable ranks for three Atlantic Provinces with Nova Scotia the only exception. These figures indicate that, for the period studied, capital grants received corresponded closely with capital projects approved. By March 31, 1966, federal data for approved capital projects showed no extensive projected expansion. It was not evident that this was the result of a satiation of need. Either educational facilities for vocational education at the secondary school level were indeed considered to be comparatively adequate at this time or other factors, beyond the scope of this study, affected provincial decisions concerning the use of available capital grants.

Percentage of Allotments Used

The percentage of the federal allotments paid to the provinces is shown in Table VI. During the period under study, only three provinces exceeded the allotment for 75 per cent cost-sharing. Newfoundland, one

CAPITAL EXPENDITURES: PAYMENTS TO CANADIAN PROVINCES

Provinces	Federal Allotment at 75 Per Cent ^a	Total Claims Paid 1961-62 to 1965-66 ^a	Per Cent Used of 75 Per Cent Allotment	Rank
Newfoundland	21.0	21.2	100.9	3
Prince Edward Island	4.3	2.6	60.5	4
Nova Scotia	30.8	8.1	26.3	8
New Brunswick	25.7	6.4	24.9	9
Quebec	224.4	83.0	37.0	6
Ontario	209.7	234.9	112.0	1
Manitoba	34.0	6.4	18.8	10
Saskatchewan	35.0	9.3	26.6	7
Alberta	47.5	51.6	108.6	2
British Columbia	54.1	31.9	59.0	5
TOTALS	686.5	455.4	66.3	

^aIn millions of dollars.

Source: Compiled from: (a) Technical and Vocational Training Agreement; (b) Department of Labour, Annual Reports for the Fiscal Years Ending March 31, 1962-1966 (Ottawa: Queen's Printer); and (c) Dominion Bureau of Statistics, 1961 Census of Canada, et passim, Series 1.2, Population Bulletin 1.2-2, Catalogue 92-542 (Ottawa: Queen's Printer).

of these three, was the Atlantic Province in this category. This province used its allotment and continued to expend money on facilities for vocational education even though being reimbursed by federal grants at the lower rate of 50 per cent. Prince Edward Island, second of the Atlantic Provinces, used approximately 60 per cent of its allotment, and ranked fourth among the Canadian Provinces. Nova Scotia, in third position, used approximately 26 per cent of its allotment and ranked eighth among Canadian Provinces. New Brunswick ranked ninth and received approximately 25 per cent of the amount allocated. These comparisons indicate that Newfoundland and Prince Edward Island made extensive use of capital grants and rank high, not only among the Atlantic Provinces but among all Canadian Provinces, in efforts to utilize available funds.

Capital Expenditures as a Percentage of Total Federal Grants

An indication of the priority that the Atlantic Provinces placed on the provision of facilities was considered necessary in order to provide further assistance in interpreting the data obtained in this survey. In Table VII the federal grant paid to each province for the Capital Expenditures Program (under the terms of the TVTA Act) is shown as a percentage of the total grants paid. Newfoundland used 80.2 per cent of its TVTA grants for capital expenditures. This province was highest among the Atlantic Provinces and second highest among all the Canadian Provinces in the percentage of its grants used for capital expenditures. Prince Edward Island, at 73.2 per cent, was second among the Atlantic Provinces. These figures support indications from preceding sections of this chapter that

TABLE VII

CAPITAL EXPENDITURES AS A PERCENTAGE OF TOTAL FEDERAL GRANTS
MARCH 31, 1962--APRIL 1, 1966

Provinces	Column 1 Total Federal Grants ^a	Column 2 Grants for Capital Expenditures ^a	Per Cent Column 2 of Column 1	Rank
Newfound- land	\$ 26,415.7	\$ 21,173.2	80.2	2
Prince Edward Island	3,607.5	2,640.7	73.2	4
Nova Scotia	14,362.7	8,141.0	56.7	8
New Brunswick	12,277.3	6,398.8	52.1	10
Quebec	139,671.9	82,974.8	59.4	6
Ontario	290,104.7	234,869.6	81.0	1
Manitoba	11,994.3	6,439.2	53.7	9
Saskatchewan	15,978.8	9,332.6	58.4	7
Alberta	68,340.6	51,618.3	75.5	3
British Columbia	45,718.4	31,897.7	69.8	5

^aIn thousands of dollars.

Source: Compiled from previous tables.

Newfoundland and Prince Edward Island made extensive use of federal grants for vocational education under the Capital Expenditures Program. Nova Scotia was third and New Brunswick was fourth among the Atlantic Provinces with 56.7 and 52.1 per cent usage respectively. Rank standings among the Canadian Provinces for Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick were 2, 4, 8 and 10 respectively. Although these data do not provide a measure of the use of the federal grants relative to their availability, they are an indication of the priority the provinces gave to the Capital Expenditures Program of the TVTA Act.

V. CHAPTER SUMMARY

The function of the Capital Expenditures Program was to provide federal grants for approved facilities for the various programs conducted under the provisions of the TVTA Act. Although several of these were beyond the parameters set for this survey, available data do not provide a break-down of capital costs for each program under the Act. Neither do federal reports distinguish between capital projects approved and those completed.

The requirements and conditions for payment of federal grants for capital projects to the provinces have been outlined. An examination of rank orders of expenditures on education compared with that for other services for the first year of the period studied revealed that Newfoundland and Prince Edward Island placed a higher priority on expenditures for education, compared with certain public services, than did the other Atlantic

Provinces.

Allotments and payments to the provinces indicated that Newfoundland and Prince Edward Island made extensive use of federal capital grants. Nova Scotia and New Brunswick were found to be low among all Canadian Provinces in the use of these grants. It was noted, however, that Newfoundland and New Brunswick reacted rapidly to the incentive of the time limit originally imposed by the federal government. It was also noted that Newfoundland and Prince Edward Island used a greater percentage of their total grants for capital expenditures than did Nova Scotia and New Brunswick.

CHAPTER IV

AN ANALYSIS OF EXPENDITURES ON PROGRAM 1: VOCATIONAL HIGH SCHOOL AND TECHNICAL TRAINING

I. INTRODUCTION

The Vocational High School and Technical Training Program included programs or full-time courses, offered as an integral part of the regular secondary school education, including technical, vocational or composite high schools, in which at least one-half of the school time was spent in instruction preparing for an occupation. The school time

. . . may include the technical, trade or occupational practice and theory as well as the mathematics and science or other related subjects which compromise a vocational curriculum.¹

Co-operative training programs in which students were required to spend a minimum of fifty per cent of their time on the job were also included. A list of schools and courses considered eligible for federal grants had to be submitted by the province. Grants were paid for those which: (1) met the requirements of the regulations under the Agreement; and (2) received the approval of the Federal Director of Vocational Training. The terms of the Agreement covering the Technical and Vocational High

¹Training Information Service, Technical and Vocational Training Branch, "Canadian Manpower Training Program" (Ottawa: Queen's Printer), p. 2.

School Program stipulated a maximum Federal Government contribution of \$15,000,000 to all provinces for operating vocational high school programs, for the period from April 1, 1961, to March 31, 1967. The maximum federal allotment for any one year was limited to \$3,000,000. An initial payment of \$30,000 was paid to each province. The provincial allotment¹ was determined by the number of persons in the 15-19 age group² in each province with the federal share not to exceed 50 per cent of the provincial costs.

The purpose of this chapter is to survey the federal grants used by the Atlantic Provinces under the allocations provided by the Agreement for Program 1. In order to do this it is necessary to know the allotments available to each province. Consideration of the need, based on population and the extent of use of Program 1 to meet this need, will be a major part of this section of the report. The relationship between enrollments in secondary school grades and the percentage of those enrollments for which federal grants were used are examined. The use of Program 1 relative to wealth as measured by per capita income is examined. Other data, developed

¹"The balance of the annual allotment is divided among the provinces and the territories on the basis of the ratio of the number of persons 15-19 years of age inclusive residing in each province to the total number of persons in such age groups in Canada, as determined by the latest census." Department of Labour, Annual Report, 1962 (Ottawa: Queen's Printer, 1963), p. 77.

²References to the use of the 15-19 age category for secondary education can be found in J. E. Cheal, Investment in Canadian Youth (Toronto: The MacMillan Company of Canada Limited, 1963), pp. 40-41; and Frederic Harbison and Charles E. Myers, Education, Manpower, and Economic Growth (Toronto: McGraw-Hill Book Company, 1964), pp. 26-27.

as a means to survey the use of federal grants for Program 1, include the calculation on a per person (15-19 age group) basis of the grant each province received. The grants paid each province are calculated as a percentage of the operating cost and also of the total cost of all programs under the TVTA Agreement for each province. The Atlantic Provinces are compared with each other and with the other Canadian Provinces.

II. AN ANALYSIS OF PROGRAM 1: EXPENDITURE

Program 1 was one of two programs under the TVTA Act which had a fixed ceiling. Various groups made representation to the Federal Government to have the ceiling lifted. Federal funds available through the TVTA Agreements could be used to provide increased opportunities for education at the secondary school level. It would seem apparent that Program 1 was seen as particularly important to the provinces in regard to supporting high school services. The Economic Council of Canada in its Second Annual Review said of the grants, "Their primary effect has been on the expansion of facilities for students in vocational high schools."¹ Another reference further indicates the importance attached to the vocational high school program.

When the various provincial authorities were provided with financial assistance for vocational education facilities, they appear

¹Economic Council of Canada, Towards Sustained and Balanced Economic Growth, Second Annual Review (Ottawa: Queen's Printer, 1965), p. 182.

to have decided, with one exception, that vocational education should be expanded and developed at the secondary school level. The federal assistance did not prescribe that developments were to take place at this level.¹

Restrictions by Allotments

Pressures from a variety of sources were applied to expand the grants for Program 1 through the removal of the allotments prescribed by the Agreement. Reports of the Canadian School Trustees' Association² and the Canadian Education Association³ refer to such a resolution passed by the Standing Committee of Ministers of Education at a meeting in Fredericton.

. . . that the Federal Government undertake immediately the payment of 50% of the operational cost of all technical and vocational education under Program 1 of the Federal-Provincial Technical and Vocational Training Agreement and that the Federal Government assume 75% of the capital cost of all approved vocational and technical facilities under the said agreement.⁴

The Canadian School Trustees' Association endorsed the resolution. The Canadian Education Association referred to the ceiling as a problem for consideration by the Council and stated,

All provinces feel that the quotas for federal assistance in

¹J. P. Mitchell, "The Current Status of Vocational Education in Canadian Secondary Schools," Peter F. Borgen (ed.), The Canadian Secondary Schools and Manpower Development (Toronto: The Ryerson Press, 1967), p. 26.

²National Technical and Vocational Training Advisory Council, "Minutes of Tenth Meeting," (November 17-18, 1965), Appendix A.

³Ibid., Appendix O, p. 1

⁴Ibid., Appendix A, p. 19.

respect of operational and capital costs impose hardships on the Provinces and limit the development of adequate vocational and technical education.¹

The report of a meeting of the National Technical and Vocational Advisory Council in 1963 states:

W. D. Mills, Director of Vocational Education, Department of Education, Nova Scotia, and Chairman of the Council's Sub-committee on Program 1 (Vocational High School Training), presented a resolution asking for substantially increased contributions by the federal Government toward operational costs of vocational high schools.²

As a result of discussion on this topic, the Council adopted a resolution requesting, among other things:

. . . that as soon as practicable, the Agreement be amended further to provide that the federal Government contribute to Program 1 as it contributes to Program 2-Technician Training and 3-Trade and Other Occupational Training.³

The report to the National Technical and Vocational Training Advisory Council from the Provincial Directors of Technical and Vocational Training Education in May, 1966, states:

In the opinion of the Directors, there appears to be a universal . . . acceptance of vocational education in the secondary schools of Canada . . . the Directors consider that the proportion of Federal support for operational costs of these Program 1 offerings is unrelated

¹National Technical and Vocational Training Advisory Council, "Minutes of Tenth Meeting," (November 17-18, 1965), Appendix 0 , p. 1.

²Department of Citizenship and Immigration, "Heavy Agenda at Council Meeting," Technical and Vocational Education in Canada, Vol. 2, No. 2 (Summer, 1964), p. 29.

³Ibid.

to actual costs relative to Federal support offered to other programs.¹

Despite these requests the federal government remained firm in its stand on allotments for Program 1. Relevant to the study at this point is an examination of the extent to which the Atlantic programs used the funds that were available.

III. ALLOTMENTS AND CLAIMS PAID

A means of surveying the use of grants for Program 1 is to examine the percentage of allotments used by the provinces. These allotments and the claims paid to the Atlantic Provinces for operating expenses of Program 1 are listed in Table VIII.

Table IX shows the federal allotments, the claims paid, and the per cent of the allotment used by each province. Rank orders are also shown. Nova Scotia and New Brunswick both used their total allotments. Prince Edward Island used 91.9 per cent. Newfoundland used only 7.5 per cent of its allotment. Obviously this province did not make extensive use of Program 1.

It is interesting to note that four other Canadian Provinces used all their federal grant for this Program.² The provinces that did

¹National Advisory Council on Technical and Vocational Training, "Minutes of Eleventh Meeting," (May 19-20, 1966), Appendix I, p. 2.

²These provinces were: Alberta, British Columbia, Ontario, and Saskatchewan.

TABLE VIII

VOCATIONAL HIGH SCHOOL TRAINING (PROGRAM 1)--ALLOTMENTS
AND PAYMENTS TO THE ATLANTIC PROVINCES

Year	Newfound- land	<u>Federal Allotments</u>		
		Prince Edward Island	Nova Scotia	New Brunswick
1961-62	\$ 111,600	\$ 48,800	\$ 158,900	\$ 137,700
1962-63	111,300	46,700	150,000	130,000
1963-64	111,300	46,700	150,000	130,000
1964-65	111,300	46,700	150,000	130,000
1965-66	111,300	46,700	150,000	130,000
TOTALS	\$ 556,800	\$ 235,600	\$ 758,900	\$ 657,700
<u>Claims Paid In</u>				
1961 to April 30, 1962	\$ 16,683	\$ 43,821	\$ 130,619	\$ 137,700
1962 to April 30, 1963	7,200	28,213	178,281	93,946
1963-64	6,275	51,023	149,925	26,054
1964-65	---	46,700	150,075	260,000
1965-66	11,500	46,700	150,000	130,000
TOTALS ^a	\$ 41,658	\$ 216,457	\$ 758,900	\$ 657,700

^aTotal payments for each year include claims paid in that year, for previous year.

Source: Department of Labour, Annual Report for Fiscal Years Ending March 31, 1962 to 1966 (Ottawa: Queen's Printer).

TABLE IX

PERCENTAGE OF FEDERAL ALLOTMENTS FOR PROGRAM 1 USED BY
THE PROVINCES 1961-1965 (INCLUSIVE)

Provinces	Federal Allotment ^a	Rank	Total Claims Paid 1961-1966 ^a	Rank	Per Cent Allotment Used	Rank*
Newfound-land	\$ 556.8	9	\$ 41.7	10	7.5	10
Prince Edward Island	235.6	10	216.5	9	91.9	8
Nova Scotia	758.9	7	758.9	7	100.0	3.5
New Brunswick	657.7	8	657.7	8	100.0	3.5
Quebec	4,465.3	1	2,691.0	2	60.2	9
Ontario	4,187.8	2	4,187.8	1	100.0	3.5
Manitoba	814.3	6	808.3	6	99.3	7
Saskatchewan	848.4	5	848.4	5	100.0	3.5
Alberta	1,068.2	4	1,068.2	4	100.0	3.5
British Columbia	1,183.8	3	1,183.8	3	100.0	3.5
TOTALS	\$14,776.8		\$12,462.3			

^aIn thousands of dollars.

*Although six provinces have been shown with a rank order of 3.5 their total allotments were used.

Source: Department of Labour, Annual Reports for the Fiscal Years Ending March 31, 1962-1966, (Ottawa: Queen's Printer).

not utilize their full allotments were as follows:

Province	Per Cent of Allotment Used
Manitoba	99.3
Prince Edward Island	91.9
Quebec	60.2
Newfoundland	7.5

It may be seen that Newfoundland was lowest by far of all Canadian Provinces in the use of these funds. The extensive use of Program 3 by this province is shown in Chapter V, and provides a possible explanation for the apparent discrepancy between capital expenditures and the low extent of use of Program 1 as indicated above.

IV. ENROLLMENTS: PROGRAM 1

The use of federal funds for Program 1 by the Atlantic Provinces has been indicated by an examination of the percentage of the federal allotment claimed by these provinces. For further information it was considered useful to survey enrollments in Program 1 and to make a comparison of these enrollments with the percentage of the population in the 15-19 age group. A further comparison was made using secondary school enrollments and the use of Program 1 at the secondary school level in order to provide information as to the actual need of the Atlantic Provinces for

the federal grants they obtained under Program 1.

The 15-19 age group was used by the federal government in determining the allocation for each province for Program 1. Table X shows the percentage of the population in this age group in each of the ten provinces. The Atlantic Provinces taken in total had a higher percentage of youth in this age group than all but one province. The exception was Quebec. Newfoundland, with 9.6 per cent, was the highest of all the Canadian Provinces. New Brunswick, Nova Scotia, and Prince Edward Island had 8.9, 8.7, and 8.5 per cent respectively in the 15-19 age population. The figure for Quebec was 8.9 per cent. It is reasonable to assume that the larger percentage of population of the Atlantic Provinces in the 15-19 age group created a greater comparative need for facilities and programs for education than in provinces where the age group was smaller proportionately.

Use of Program 1 for Age Group 15-19

The proportion of provincial populations in the 15-19 age group is cited here as an indicator of educational need. The percentage of this population enrolled in Program 1 provides a measure of the extent to which the Atlantic Provinces used Program 1 to meet that need.

Table XI shows the enrollment in Program 1 as a percentage of the 15-19 age group. New Brunswick had 12.4 per cent and Prince Edward Island had 8.7 per cent in Program 1. These provinces ranked first and second among the Atlantic Provinces and compared favourably with all Canadian Provinces in the use of Program 1. Conversely, the figures of

TABLE X
PERCENTAGE OF THE PROVINCIAL POPULATIONS IN
THE 15-19 AGE GROUP (1961 CENSUS)

Provinces	Population 1961 ^a	15-19 Age Group ^a	Per Cent	Rank
Newfoundland	457.9	43.8	9.6	1
Prince Edward Island	104.6	8.9	8.5	5
Nova Scotia	737.0	64.2	8.7	4
New Brunswick	597.9	53.5	8.9	2.5
Quebec	5,259.2	467.4	8.9	2.5
Ontario	6,236.1	436.9	7.0	9
Manitoba	921.7	70.8	7.7	7
Saskatchewan	925.2	72.9	7.9	6
Alberta	1,331.9	99.0	7.4	8
British Columbia	1,629.1	112.6	6.9	10
TOTALS	18,200.6	1,430.0	7.9	

^aIn thousands.

Source: Compiled from data in Dominion Bureau of Statistics, 1961 Census of Canada, Population Bulletin 1.2-2 (Ottawa: Queen's Printer), pp. 20-1 to 20-9.

TABLE XI
ENROLLMENT IN PROGRAM 1 AS A PERCENTAGE OF
AGE GROUP 15-19 (1961 CENSUS)

Provinces	Enrollment Program 1 1965-66	Age Group 15-19 ^a	Per Cent of Total in Program 1	Rank
Newfoundland	290	43.8	0.7	9
Prince Edward Island	773	8.9	8.7	5
Nova Scotia	2,196	64.2	3.4	8
New Brunswick	6,616	53.5	12.4	4
Quebec	*	467.4	*	*
Ontario	167,169	436.9	38.3	1
Manitoba	5,426	70.8	7.7	6
Saskatchewan	4,291	72.9	5.9	7
Alberta	13,196	99.0	13.3	3
British Columbia	15,420	112.6	13.7	2
TOTALS	215,377	1,430.0	15.6	

^a In thousands.

* Figures for Quebec not reported.

Sources: Dominion Bureau of Statistics, 1961 Census of Canada Population Bulletin 1.2-2 (Ottawa: Queen's Printer), pp. 20-1 to 20-9; and Department of Labour, Annual Report for the Fiscal Year Ending March 31, 1966 (Ottawa: Queen's Printer), p. 72.

0.7 per cent for Newfoundland and 3.4 per cent for Nova Scotia indicate that these two provinces were lowest among all Canadian Provinces in the use of Program 1 relative to the population in the 15-19 age group.¹ These conclusions are supported by rank orders of 9, 5, 8, and 4, for Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick, as shown in Table XI.

Comparison of the per cent of population in the 15-19 age group with the per cent of this age group in Program 1 follows: Newfoundland, with the highest percentage of all Canadian Provinces in respect to the proportion of its population in this age group, had the lowest percentage of this group in Program 1. Nova Scotia also ranked much lower in the per cent of the age group enrolled in Program 1 than it did in its 15-19 population rank. On the other hand, Prince Edward Island had similar rank orders for both population and enrollment. New Brunswick ranked slightly lower in the per cent of population enrolled in Program 1 than it did in the 15-19 population. This comparison indicates again that Prince Edward Island and New Brunswick made the most extensive use of Program 1 among the Atlantic Provinces, relative to the need as measured by the per cent of population in the 15-19 age group. Nova Scotia certainly made less use of the program. Newfoundland was the lowest of all provinces in the use of federal funds for Program 1.

¹Rank orders were approximately the same when a similar table was compiled using totals for the years 1964-66.

Despite the fact that Nova Scotia and New Brunswick each used 100 per cent of their allotments and Prince Edward Island used 91.9 per cent of its allotment (see Table IX) for operating costs of Program 1, it seems safe to conclude that the extent of use of this program by the Atlantic Provinces to meet educational needs based on the percentage of the population in the 15-19 age group is low when compared with other Canadian Provinces.

The fact that Prince Edward Island, Nova Scotia, and New Brunswick used only 60.5, 26.3, and 24.9 per cent respectively of their allotments for capital expenditures (see Table VI) while a need seems to have existed for educational services for the 15-19 age group requires explanation beyond the limits set for this survey.

Use of Program 1 in Secondary Schools

In this survey of federal grants for education at the secondary school level, it was considered useful to examine the relationship between enrollments in secondary education and those in Program 1. Table XII is used to show the percentage of students in grades 9 to 13 who are classified under Program 1. New Brunswick had 17.5 per cent of students in this category and not only led the Atlantic Provinces but ranked second among Canadian Provinces. Prince Edward Island with 11.5 per cent was second, while Nova Scotia with 5.2 per cent and Newfoundland with 1.2 per cent were in third and fourth position among the Atlantic Provinces. It should be recognized that this criterion does not take into consideration

TABLE X11

ENROLLMENT IN PROGRAM 1 AS A PERCENTAGE OF ENROLLMENT
IN GRADES 9-13, (1965-66)

Provinces	<u>Enrollment 1965-66</u>		Per Cent in Program 1	Rank
	Grades 9-13 ^a	Program 1 ^b		
Newfoundland	24,555	290	1.2	9
Prince Edward Island	6,739	773	11.5	5
Nova Scotia	42,083	2,196	5.2	8
New Brunswick	37,858	6,616	17.5	2
Quebec	275,503	*	*	*
Ontario	445,035	167,169	37.6	1
Manitoba	59,884	5,426	9.1	6
Saskatchewan	62,531	4,291	6.9	7
Alberta	95,880	13,196	13.8	3.5
British Columbia	111,696	15,420	13.8	3.5

^aDominion Bureau of Statistics, Preliminary Statistics of Education, 1965-66 (Ottawa: Queen's Printer, 1967), p. 21.

^bDepartment of Labour, Annual Report for the Fiscal Year Ending March 31, 1966 (Ottawa: Queen's Printer, 1966), p. 72.

*Figures for Quebec not reported.

the "holding power" of the school.¹ Wide variations occur among the provinces in the percentage of students completing secondary schooling.² The data do assist in an interpretation of the use of federal grants by showing how the provinces used them for education at the secondary school level.

V. RELATIONSHIP BETWEEN USE OF PROGRAM 1 AND INCOME

It appeared from the discussion of enrollments in Program 1 that the wealthier provinces made greater use of this program. Using earned income per capita as a measure of wealth, comparisons were made among the provinces. Rank orders are listed in Table XIII for the per capita income for the ten provinces for 1961 and for 1963-1965 calculated as the average of the three years. The income per capita and rank orders for 1965 are also listed in this table. Table XIV shows a comparison of the rank orders of the provinces for earned income per capita (1961) with the per cent of the 15-19 age group enrolled in Program 1. A positive

¹Dr. C. R. Ford stated, "the most noticeable impact of the expansion of vocational programs in high schools is the 'holding power' of the high schools generated by the greater interest of students in the training now offered." C. R. Ford cited in National Technical and Vocational Training Advisory Council, "Minutes of Tenth Meeting," (November 17-18, 1965), p. 9.

²For statistics on this topic see Dominion Bureau of Statistics, Education Division, Preliminary Statistics of Education 1965-66 (Ottawa: Queen's Printer, April, 1967), p. 53.

TABLE XIII
PERSONAL INCOME PER CAPITA

Provinces	Income Per Capita ^a 1961	Rank	Average of 3 Years 1963-65 (Inclusive) Rank	Income Per Capita ^a 1965	Rank
Newfoundland	\$ 934	10	10	\$ 1173	10
Prince Edward Island	1000	9	9	1370	9
Nova Scotia	1197	7	7	1483	7
New Brunswick	1064	8	8	1374	8
Quebec	1383	6	6	1754	6
Ontario	1843	1	1	2296	1
Manitoba	1513	4	5	1919	5
Saskatchewan	1462	5	4	1966	4
Alberta	1595	3	3	1974	3
British Columbia	1802	2	2	2263	2

^aIn current dollars.

Source: Computed from Economic Council of Canada, "Prices, Productivity and Employment," Third Annual Review, (Ottawa: Queen's Printer, November, 1966), p. 245.

TABLE XIV
CORRELATION: PER CAPITA INCOME (1961)
AND ENROLLMENT IN PROGRAM 1

Provinces	1961 Per Capita Earned Income (Wealth) Rank Order ^a	Per Cent Age Group 15-19 Enrolled in Program 1
Newfoundland	10	9
Prince Edward Island	9	8
Nova Scotia	7	6
New Brunswick	8	7
Quebec	6	*
Ontario	1	1
Manitoba	4	4
Saskatchewan	5	5
Alberta	3	3
British Columbia	2	2

^aRobert C. Bryce, "The Technical and Vocational Training Assistance Act of 1961-67: An Historical Survey and Documentary Analysis" (unpublished Doctoral dissertation, University of Alberta, Edmonton, 1970), p. 237.

*Reranked to omit Quebec. Figures not reported for Program 1.

correlation¹ of .750 indicates a close relationship (significant at the .02 level of confidence) between income and use of Program 1.

The same comparison was made using the rank orders of average incomes for 1963, 1964, and 1965, and for per capita income for 1965 (shown in Table XIII). The rank orders are the same in both cases. Table XV shows these data. A positive correlation of .733 again supports the assumption that generally the wealthier provinces made greater use of Program 1 for the education of the 15-19 age group than did the lower income provinces.

The relationship between income and enrollment in Program 1 is shown in Figure 1. It should be noted that New Brunswick and Prince Edward Island stand out among all Canadian Provinces in the use of Program 1 for the 15-19 age group relative to the per capita earned income. Prince Edward Island, Nova Scotia and New Brunswick used only 60.5, 26.3 and 24.9 per cent of their allotment for capital expenditure at 75 per cent cost-sharing (see Table VI). The existence of this situation, in view of the apparent need for educational services for the 15-19 age group, suggests a need for a study beyond the limits set for this thesis.

VI. FINANCIAL MEASURES OF THE USE OF PROGRAM 1

Three measures of the use of federal grants for Program 1 are

¹A Rank Difference Correlation Coefficient was used. See Henry E. Garrett, Statistics in Psychology and Education (fifth edition; New York: David McKay Company Inc., 1962), pp. 267 and 371-375.

TABLE XV
CORRELATION: PER CAPITA INCOME (1965) AND
ENROLLMENT IN PROGRAM 1

Province	Per Capita Earned Income 1965 ^a Rank Order ^b	Per Cent 15-19 Age Group Enrolled in Program 1 Rank Order
Newfoundland	10	9
Prince Edward Island	9	5
Nova Scotia	7	8
New Brunswick	8	4
Quebec	6	*
Ontario	1	1
Manitoba	5	6
Saskatchewan	4	7
Alberta	3	3
British Columbia	2	2

^aEconomic Council of Canada, "Prices, Productivity and Employment," Third Annual Review, (Ottawa: Queen's Printer, 1966), p. 245.

^bThe rank orders are the same if the average for the years 1963, 1964, 1965 is used.

*Reranked to omit Quebec. Figures not reported for Program 1.

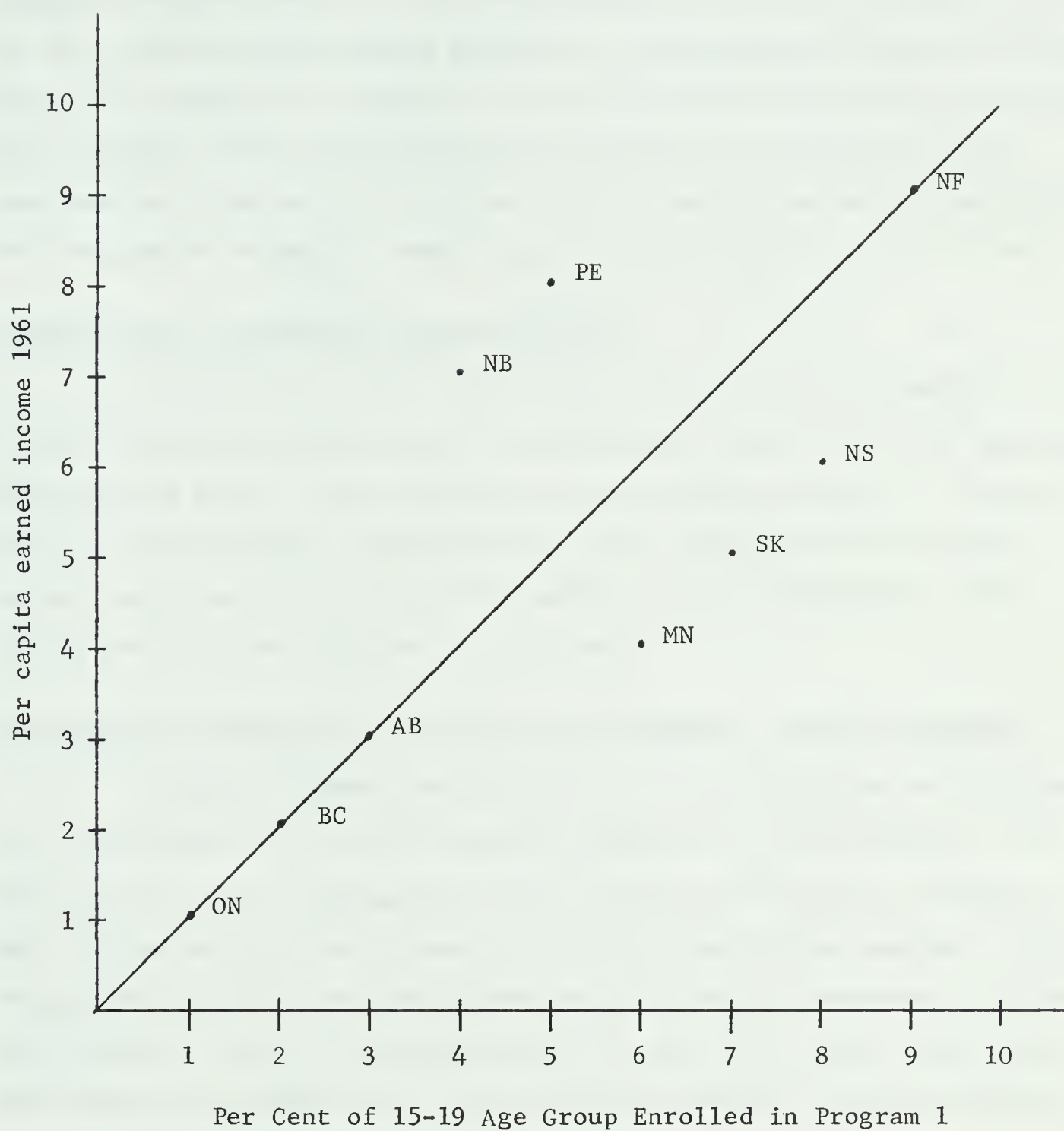


FIGURE 1

CORRELATION: PER CAPITA INCOME AND ENROLLMENT IN PROGRAM 1

discussed in this section of the survey. The first one is the total grant received by each province based on the population of the age group 15-19 in that province. The second measure is a percentage obtained by dividing the grant received for Program 1 by the total operating grant received for all programs. The third measure was obtained by dividing the grant received for Program 1 by the total federal expenditure under the TVTA Act for the period surveyed. These data are calculated for each province.

Federal Grant Per Person (15-19 Age Group)

Table XVI is used to show the grant paid to the province by the federal government on the basis of each person in the 15-19 year age group. These varied from a high of \$24.33 for Prince Edward Island to a low of \$0.95 in Newfoundland. New Brunswick with a figure of \$12.29 ranked second among the Atlantic Provinces and all Canadian Provinces. Nova Scotia was in third position in both cases.

Percentage of Federal Grant (Operational Expenses) Used for Program 1

Table XVII shows the grants paid to the provinces for Program 1 as a percentage of the total operating expenses for all programs. The data do not provide information on the adequacy of the use of Program 1, but they do indicate the financial priority given to the program. Again, Prince Edward Island was the highest of all Canadian Provinces (22.4 per cent) and the lowest was Newfoundland (0.8 per cent). Nova Scotia was next highest (12.2 per cent) with a rank of 4 for all Canadian Provinces, followed by New Brunswick (11.2 per cent) with a rank of 5.

Percentage of Total Federal Grant Used for Program 1

The third measure of use of federal grants for Program 1 proposed for this section of the survey is illustrated in Table XVIII.

TABLE XVI
FEDERAL GRANTS PAID PER PERSON AGE 15-19

Provinces	Federal Grants Paid Program 1 1961-62 to 1965-66 ^a	Total Age Group 15-19 ^b	Grant Paid Per Person Age 15-19	Rank
Newfound- land	\$ 41.7	43.8	.95	10
Prince Edward Island	216.5	8.9	24.33	1
Nova Scotia	758.9	64.2	11.82	3
New Brunswick	657.7	53.5	12.29	2
Quebec	2691.0	467.4	5.76	9
Ontario	4187.8	436.9	9.59	8
Manitoba	808.3	70.8	11.42	5
Sask- atchewan	848.4	72.9	11.64	4
Alberta	1068.2	99.0	10.79	6
British Columbia	1183.8	112.6	10.51	7

^aIn thousands of dollars.

^bIn thousands.

TABLE XVII

FEDERAL GRANTS PAID ON PROGRAM 1 AS A PERCENTAGE
OF TOTAL FEDERAL GRANTS (OPERATIONAL)

Provinces	Column 1 Federal Grants Paid for Operating Expenses 1961-66 All Programs ^a	Column 2 Federal Grants Program 1 ^a	Per Cent Column 2 of Column 1	Rank
Newfoundland	\$ 5,242.5	\$ 41.7	0.8	10
Prince Edward Island	966.8	216.5	22.4	1
Nova Scotia	6,221.7	758.9	12.2	4
New Brunswick	5,878.5	657.7	11.2	5
Quebec	56,697.1	2,691.0	4.7	9
Ontario	55,235.1	4,187.8	7.6	7
Manitoba	5,555.1	808.3	14.6	2
Saskatchewan	6,646.2	848.4	12.8	3
Alberta	16,722.3	1,068.2	6.4	8
British Columbia	13,820.8	1,183.8	8.6	6

^aIn thousands of dollars.

TABLE XV111
FEDERAL GRANTS PAID ON PROGRAM 1 AS A PERCENTAGE
OF TOTAL FEDERAL GRANTS

Provinces	Column 1 Total Federal Grants 1961-1966 ^a	Column 2 Federal Grants Program 1 ^a	Per Cent Column 2 of Column 1	Rank
Newfoundland	\$ 26,415.7	\$ 41.7	0.2	10
Prince Edward Island	3,607.5	216.5	6.0	2
Nova Scotia	14,362.7	758.9	5.3	4.5
New Brunswick	12,277.3	657.7	5.4	3
Quebec	139,671.9	2,691.0	1.9	7
Ontario	290,104.7	4,187.8	1.4	9
Manitoba	11,994.3	808.3	6.7	1
Saskatchewan	15,978.8	848.4	5.3	4.5
Alberta	68,340.6	1,068.2	1.6	8
British Columbia	45,718.4	1,183.8	2.6	6

^aIn thousands of dollars.

Prince Edward Island spent 6.0 per cent of its total grant on Program 1 and thus ranked first among the Atlantic Provinces and second for all Canadian Provinces. New Brunswick followed with 5.4 per cent, ranking third among the provinces. Nova Scotia with 5.3 per cent is in next position, and Newfoundland with 0.2 per cent was lowest of all the provinces. Again the indications are that Newfoundland did not make extensive use of Program 1.

It should be noted here that, as in previous cases, the three measures used in this section of the survey do not indicate the extent to which available grants were used relative to their availability to the provinces. These measures serve as indicators of the priorities placed on the distribution of the grants received. In all three instances where the measure was used Prince Edward Island led the Atlantic Provinces both in grants received (per person age 15-19) and in percentage of its grants used for Program 1. It was noted that this province was highest of all provinces in two of the criteria. Except for one case, where the position was reversed, New Brunswick was next, with Nova Scotia following. In all cases where this measure of priority was applied Newfoundland was lowest of all the Canadian Provinces.

VII. CHAPTER SUMMARY

An analysis of conditions under which federal grants could be paid to the provinces for operating expenses of vocational high schools (Program 1) was provided in this chapter. Five measures were used to

survey the grants paid to the Atlantic Provinces. The allotment, and the percentage of this allotment used, were shown. The use of grants was examined relative to the need as determined by the age group 15-19, and by the secondary school population. An effort was made to relate the use of grants measured by the percentage of the 15-19 age group enrolled in Program 1 to the per capita income of the provinces. Finally, a comparison showed the grants used for Program 1 as a percentage of total grants received.

A survey of the use of federal grants for Program 1 in this chapter has shown that Nova Scotia and New Brunswick received grants totalling their allotment. Prince Edward Island used most of its allocation, but Newfoundland made only limited use of the federal grants available for Program 1. Allotments imposed by the federal government were considered by several sources as restrictions on the program.

The Atlantic Provinces were found to rank high among all Canadian Provinces in the percentage of the population in the 15-19 age group, indicating a greater need for educational services at the secondary school level. The percentage of the 15-19 age group enrolled in Program 1, showed that New Brunswick led the Atlantic Provinces, with Prince Edward Island a close second. These provinces ranked high, and Nova Scotia and Newfoundland ranked lowest of all Canadian Provinces in the percentage of the 15-19 age group enrolled in Program 1.

A comparison of the percentage of the population of each province in the 15-19 age group with the percentage of this group enrolled in Program 1 as a criterion of need, indicated that Prince Edward Island and

New Brunswick came closest of the Atlantic Provinces to meeting this need. A positive correlation between per capita income and use of grants for Program 1 suggests that, in general, the provinces with the greatest per capita income made most extensive use of the grants.

The use of the federal grants was examined with reference to the federal grant contributed per person in the 15-19 age group. The grants received were expressed as a percentage of the total grant and of the grant for operational expenses.¹ Prince Edward Island ranks high among the Atlantic Provinces. New Brunswick and Nova Scotia were in second and third places, and compared well with all Canadian Provinces. Newfoundland, however, made comparatively slight use of Program 1.

¹"Operational grants" refers to those paid for all programs under the TVTA Act, except those qualified under the Capital Expenditures Program.

CHAPTER V

AN ANALYSIS OF EXPENDITURES ON PROGRAM 3: TRADE AND OTHER OCCUPATIONAL TRAINING

I. INTRODUCTION

Program 3 was designed to provide training for persons above compulsory school attendance age¹ who had left elementary or secondary school and who could be considered capable of benefiting from the instruction. Pre-employment training, up-grading of qualifications, or retraining were all offered under Program 3. The aim was to increase occupational competence through training in skill development and related knowledge. Courses could be offered in public trade schools, institutes, or other centers approved by a province. They could vary from five days to two years depending on the type of course offered and the educational requirements of the occupation.² In discussing programs under the agreement, Goard stated, "Program 3 is the most general and flexible program in this

¹The Act refers to "regular school leaving age." The agreement with the provinces provided for interpretation. See 9 Elizabeth II, An Act Respecting Technical and Vocational Training Assistance, Chapter 6 (Ottawa: Queen's Printer, 1961), p.3.

²Technical and Vocational Training Agreement (Ottawa: Training Information Service, Technical and Vocational Training Branch, April, 1966), p. 21. (Office consolidation.)

series."¹ Because Program 3 was used to provide trade and other vocational training for persons of secondary school age it was included in this study. The federal government paid 50 per cent of the approved operational costs of the program. Unlike Program 1, the grants were available without the restriction of allotments or maximum contributions.

Program 3 of the Technical and Vocational Training Agreement is the basic school-centered program which provides a great variety of pre-employment (including pre-apprenticeship) courses for young adults who have left the regular school system.²

Thus, Program 3 was particularly suited for providing training for youth of secondary school age who had left school before completing the regular high school program. It was especially applicable to those provinces that had a high "drop-out" rate from secondary schools that offered only an academic curriculum.

The purpose of this chapter is to survey the federal grants paid to the Atlantic Provinces for Program 3 under the terms of the TVTA Act. The grants paid to each province are outlined here and, in addition, consideration is given to the use made of these grants. The use of the grants relative to the need, as determined by the percentage of the population of each province in the 15-24 age group, is also considered.

¹Dean H. Goard, "Current Developments in Canadian Technical and Vocational Education," Phi Delta Kappan, Vol. 46, No. 8 (April, 1965), p. 345.

²National Advisory Council on Technical and Vocational Training, "Minutes of Eleventh Meeting," (May 19-20, 1966), Appendix B, p. B-12.

This age group was selected as being most appropriate because of the youth services available under Program 3 and consequently the large number of youth served. Data are provided which make possible an examination of the relationship between per capita income (as a measure of wealth) and the use of Program 3. In order to indicate further the use of federal funds for Program 3, the grant calculated on a per person (15-24 age group) basis is shown. Other tables show the percentage that the grants paid to Program 3 were of the total grants paid to each province for the operational expenses of all programs under the Agreement, and also of the total grants paid to each province. As in preceding chapters, the Atlantic Provinces are compared with each other and also with all the Canadian Provinces. This latter procedure provides a broad perspective for the survey.

II. AN ANALYSIS OF PROGRAM 3: EXPENDITURE

The Agreement under the TVTA Act set no maximum, such as existed for Program 1, for shareable grants for Program 3. No federal financial limitations (except the 50 per cent cost-sharing ratio) impeded development of approved programs by the provinces. This "open-ended" feature of the federal grant structure meant that Program 3 could be used within limits determined by the educational system of each province.¹

¹Determination of the reasons for the limitations on, and variations in, the use of Program 3 among the provinces lies beyond the limits set for the present survey; this could be a topic for another survey.

III. CLAIMS PAID

Table XIX shows the amount of money paid by the federal government to each of the Atlantic Provinces for the five year period from 1961-62 to 1965-66. Newfoundland received the largest grant during this period. Under the 50 per cent cost-sharing agreement, this province made the greatest expenditure of all the Atlantic Provinces for Program 3. New Brunswick was second in the extent of claims made for federal grants for this program. Nova Scotia was third with an expenditure of approximately sixty per cent of that of Newfoundland, and Prince Edward Island was in fourth place.

Table XX lists the claims paid to all provinces and their rank orders. The position of Newfoundland is noteworthy as it ranked fifth among all Canadian Provinces in the grants received. This use of the grants seems rather extensive for a province that ranked tenth in population among all Canadian Provinces. Furthermore, as these grants were matching grants, this same province, which had the lowest per capita income among the Canadian Provinces,¹ ranked fifth among all the provinces in expenditure on Program 3. New Brunswick was second among the Atlantic Provinces in grants received and sixth among all Canadian Provinces. Nova Scotia and Prince Edward Island, in third and fourth position among the Atlantic Provinces in grants received, had ranks of 8 and 10 when compared with all

¹See Table XIII, Chapter IV.

TABLE XIX
TRADE AND OTHER OCCUPATIONAL TRAINING (PROGRAM 3)
PAYMENTS TO THE ATLANTIC PROVINCES

	New- found- land	Prince Edward Island	Nova Scotia	New Bruns- wick
Claims paid in 1961 to April 30, 1962	\$ 35,378	\$ 39,679	\$ 104,717	\$ 190,019
Claims paid in 1962 to April 30, 1963	60,462	23,455	147,359	251,687
Claims paid in 1963-64	391,575	22,914	279,637	167,808
Claims paid in 1964-65 ^a	357,315	101,380	441,790	1,369,970
Claims paid during 1965-66 ^a	2,341,738	74,161	736,857	869,712
TOTALS	\$3,186,468	\$261,589	\$1,710,360	\$2,849,196

^aIncludes payments for classroom training of apprentices which was included with the apprenticeship program in previous reports of the Department.

Source: Department of Labour, Annual Reports for Fiscal Years Ending March 31, 1961-1966 (Ottawa: Queen's Printer).

TABLE XX
PAYMENTS TO THE CANADIAN PROVINCES--PROGRAM 3

Provinces	Total Grants Paid 1961-62 to 1965-66 ^a	Rank
Newfoundland	\$ 3,186.5	5
Prince Edward Island	261.6	10
Nova Scotia	1,710.4	8
New Brunswick	2,849.2	6
Quebec ^b	21,285.1	1
Ontario	6,975.5	3
Manitoba	981.0	9
Saskatchewan	2,237.3	7
Alberta	8,606.9	2
British Columbia	4,855.4	4
TOTAL	<u>\$ 52,948.9</u>	

^aIn thousands of dollars.

^bFederal assistance in the training of apprentices in Quebec is given under Program 3 of the Technical and Vocational Training Agreement.

Source: Compiled from Department of Labour, Annual Reports, 1962-1966.

the provinces in Canada.

IV. ENROLLMENTS: PROGRAM 3

In this section of the survey enrollments in Program 3 are listed as a percentage of the 15-24 age group. A comparison is made between these enrollments and the percentage of the 15-24 age group in the total population. The percentage of the population in the 15-24 age group for each of the ten provinces is shown in Table XXI. As did the 15-19 age group, the percentage of the 15-24 age group in the Atlantic Provinces ranked high among all provinces. The highest for all the provinces was Newfoundland at 16.2 per cent. Nova Scotia, with 15.4 per cent, was second among the Atlantic Provinces and third highest among the Canadian Provinces. New Brunswick and Prince Edward Island followed with 15.2 and 14.5 per cent.¹ The higher the percentage of the population in this age group (15-24) the greater the comparative educational need. The use of federal funds under the TVTA Act for Program 3 as a means of meeting this need is examined next.

Use of Program 3 for Age Group 15-24

In this section of the survey enrollments in Program 3 are noted and comparisons are made of the rank orders of the per cent of the 15-24

¹Quebec, with 15.9 per cent is second highest in Canada. No other Canadian Province has a higher rank in the percentage of the population in the 15-24 age group than those of the Atlantic Provinces.

TABLE XXI
PERCENTAGE OF PROVINCIAL POPULATION IN THE 15-24 AGE GROUP
(1961 CENSUS)

Provinces	Population ^a	15-24 Age Group ^a	Per Cent	Rank
Newfoundland	457.9	74.1	16.2	1
Prince Edward Island	104.6	15.2	14.5	5
Nova Scotia	737.0	113.6	15.4	3
New Brunswick	597.9	90.9	15.2	4
Quebec	5259.2	837.1	15.9	2
Ontario	6236.1	823.9	13.2	9
Manitoba	921.7	129.8	14.1	6.5
Saskatchewan	925.2	129.9	14.0	8
Alberta	1331.9	188.2	14.1	6.5
British Columbia	1629.1	207.9	12.8	10
TOTALS	18200.6	2610.6	14.3	

^aIn thousands.

Source: Compiled from data in Dominion Bureau of Statistics, 1961 Census of Canada, Population Bulletin 1.2-2 (Ottawa: Queen's Printer), pp. 20-1 to 20-9.

age group enrolled in Program 3 in the Atlantic Provinces. These data indicate the extent to which the program was used for this group. Table XXII shows the enrollment in Program 3 as a percentage of the 15-24 age group. Percentages of 5.2, 3.2, 3.0, and 1.3 for Newfoundland, New Brunswick, Prince Edward Island and Nova Scotia, give rise to rank standings of 2, 5, 6, and 9 respectively for these provinces when compared with all Canadian Provinces. These data indicate that Newfoundland ranked first among the Atlantic Provinces and second for all Canadian Provinces in the use of Program 3. New Brunswick was second among the Atlantic Provinces, and ranked fifth for all Canadian Provinces. Prince Edward Island ranked next to New Brunswick. The rank for Nova Scotia was next to the lowest for all provinces.¹ These data indicate the use that the Atlantic Provinces made of federal grants available for Program 3 relative to the need as measured by the percentage of the population in the 15-24 age group.² The data further indicate comparative use of the federal grants for this program by the Atlantic Provinces in relation to all Canadian Provinces.

A comparison of the percentage of the population in the 15-24 age group with the percentage of this age group enrolled in Program 3 for each province shows that Newfoundland, the province with the highest

¹A similar situation was shown for Nova Scotia in Table X, Chapter IV, where the percentage of the 15-19 age group enrolled in Program 1 was listed.

²Calculations using total enrollments for the years 1964-66 in a similar table resulted in rank orders that were approximately the same.

TABLE XXII
ENROLLMENT IN PROGRAM 3 AS A PERCENTAGE OF THE
AGE GROUP 15-24 (1961 CENSUS)

Provinces	Total Enrol- ments 1965-66 ^a	Rank	Total Age Group 15-24 ^b	Rank	Per Cent of Total in Program 3	Rank
Newfound- land	3,846	6	74.1	9	5.2	2
Prince Edward Island	461	10	15.2	10	3.0	6
Nova Scotia	1,502	9	113.6	7	1.3	9
New Brunswick	2,944	8	90.9	8	3.2	5
Quebec	13,362	1	837.1	1	1.6	8
Ontario	7,995	4	823.8	2	1.0	10
Manitoba	3,664	7	129.8	6	2.8	7
Saskat- chewan	5,202	5	129.9	5	4.0	4
Alberta	10,308	3	188.2	4	5.5	1
British Columbia	<u>10,459</u>	2	<u>207.9</u>	3	5.0	3
TOTALS	59,743		2,610.5			

^aIncludes classroom training of apprentices.

^bFigures in thousands per 1961 Census.

Source: Department of Labour, Annual Report March 31, 1966, (Ottawa: Queen's Printer); and, Dominion Bureau of Statistics, Census of Canada, 1961, (Ottawa: Queen's Printer), pp. 20-1 to 20-9.

percentage of population in the 15-24 age group, led the Atlantic Provinces in the per cent of students enrolled in Program 3. This province ranked second among all the Canadian Provinces. New Brunswick, with a rank of 5 and Prince Edward Island with a rank of 6 in percentage of students (15-24 age group) in Program 3 were in second and third position among the Atlantic Provinces. Each of these three provinces were lower by one rank, and Nova Scotia was lower by six ranks¹ in the percentage of students enrolled in Program 3 than in the percentage of students in the 15-24 age group. Table XXI and XXII were used in making these comparisons.

Although the rank orders of all the Atlantic Provinces were lower in the percentage enrollment of the 15-24 age group in Program 3 than in the percentage of the population in this age group, the same situation existed for four other Canadian Provinces.²

V. RELATIONSHIP BETWEEN USE OF PROGRAM 3 AND INCOME

The survey of the use of federal grants for Program 1 indicated that the wealthier provinces made greater use of that program. The use of grants for Program 3 did not seem to follow a similar pattern. Rank orders for per capita income for 1961 are compared with rank orders of

¹Quebec was the only other province in the same position as Nova Scotia.

²The three Western Provinces, Saskatchewan, Alberta, and British Columbia were the only provinces with higher rank orders for the percentage of students enrolled in Program 3 than for the percentage of the 15-24 age group in the population.

the percentage of the age group 15-24 in Table XXIII. A correlation coefficient¹ of $-.127$ indicates that no significant relationship existed between per capita income and the use of Program 3.

A similar comparison using rank orders² of per capita income for 1965 in Table XXIV, again revealed no correlation of significance ($-.091$). The assumption that no significant relationship existed between wealth (measured by income per capita) and the use of federal grants for Program 3 seems acceptable.

Figure 2 is used to illustrate this lack of correlation and the absence of any pattern of relationship between the use of Program 3 and per capita income.

VI. FINANCIAL MEASURES OF THE USE OF PROGRAM 3

Additional information on the federal grants paid to the Atlantic Provinces for Program 3 is provided by three measures of their use. The first of these is the grant received per person in the 15-24 age group. The second is the percentage that the grant used by each province for Program 3 was of the total federal grant paid to that

¹ A Rank Difference Correlation Coefficient (ρ) was used. A value of $-.127$ for ρ is not significant at the .05 level of confidence ($-.632$). See Henry E. Garrett, Statistics In Psychology and Education (fifth edition; New York: David McKay Company Inc., 1962), pp. 267 and 371-375.

² Per capita income expressed as an average of the years 1963, 1964, 1965 has the same rank orders.

TABLE XXIII
RANK ORDERS PER CAPITA INCOME (1961) AND
ENROLLMENT IN PROGRAM 3

Provinces	Per Capita Earned Income 1961 Rank Order	Per Cent in Age Group 15-24 Enrolled in Program 3 Rank Order
Newfoundland	10	2
Prince Edward Island	9	6
Nova Scotia	7	9
New Brunswick	8	5
Quebec	6	8
Ontario	1	10
Manitoba	4	7
Saskatchewan	5	4
Alberta	3	1
British Columbia	2	3

Sources: Data obtained from Tables XIII and XXII , pages 65 , and 86 .

TABLE XXIV
RANK ORDERS PER CAPITA INCOME (1965) AND
ENROLLMENT IN PROGRAM 3

	Per Capita Earned Income, 1965 (Rank orders)	Percent of 15-24 Age Group Enrolled in Program 3
Newfoundland	10	2
Prince Edward Island	9	6
Nova Scotia	7	9
New Brunswick	8	5
Quebec	6	8
Ontario	1	10
Manitoba	5	7
Saskatchewan	4	4
Alberta	3	1
British Columbia	2	3

Source: Data compiled from previous tables.

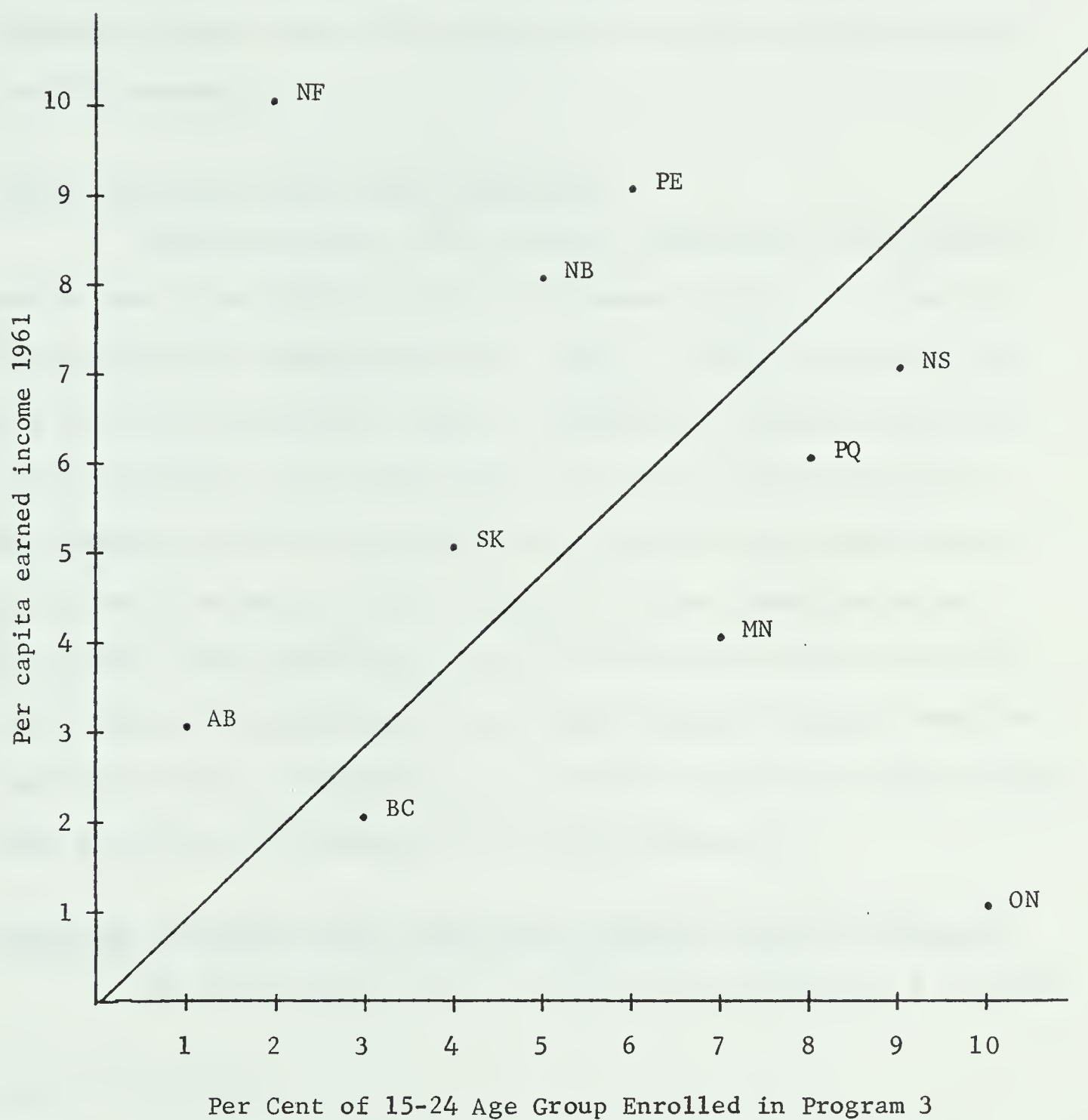


FIGURE 2

PER CAPITA INCOME AND ENROLLMENT IN PROGRAM 3

province for operating expense.¹ The grant received for Program 3 expressed as a per cent of the total grant for each province provides the third measure.

Federal Grant Per Person (15-24 Age Group)

The grants paid to each province, calculated on the basis of each person in the 15-24 age group, are shown in Table XXV. For the Atlantic Provinces these varied from a high of \$43.00 for Newfoundland to a low of \$17.21 for Nova Scotia. Newfoundland, highest among the Atlantic Provinces, was second highest among all Canadian Provinces. New Brunswick, second in the Atlantic Provinces, with an expenditure of \$31.34 was third among all the provinces. Prince Edward Island and Nova Scotia, with expenditures of \$17.21 and \$15.07, were in third and fourth place and ranked seventh and eighth among the Canadian Provinces. These data indicate the high priority placed on the use of federal grants under the TVTA Act by Newfoundland and New Brunswick.²

Percentage of Federal Grant (Operational Expenses) Used for Program 3

The federal grant paid to each province for Program 3 is shown

¹This refers to all grants paid to the provinces under the terms of the TVTA Act and Agreements, with the exception of the Capital Expenditures Program.

²Alberta was the only Canadian Province with a larger expenditure per person (age 15-24) for Program 3 (\$45.73).

TABLE XXV
FEDERAL GRANTS PAID PER PERSON AGE 15-24
FISCAL YEARS 1961-62 to 1965-66

Provinces	Federal Grants Paid Program 3 1961-62 to 1965-66 ^a	Total Age Group ^b 15-24	Grant Paid Per 15-24 Year Person	Rank
Newfoundland	\$ 3,186.5	74.1	\$ 43.00	2
Prince Edward Island	261.1	15.2	17.21	7
Nova Scotia	1,710.4	113.6	15.07	8
New Brunswick	2,849.2	90.9	31.34	3
Quebec	21,285.1	837.1	25.43	4
Ontario	6,975.5	823.8	8.46	9
Manitoba	981.0	129.8	7.55	10
Saskatchewan	2,237.3	129.9	17.22	6
Alberta	8,606.9	188.2	45.73	1
British Columbia	4,855.4	207.9	23.35	5

^aIn thousands of dollars.

^bIn thousands.

in Table XXVI as a percentage of the total federal grant towards operating expenses as paid to each province. These data indicate the financial priority given to Program 3 by the provinces. Newfoundland ranked highest of all Canadian Provinces in the percentage of its grant used for Program 3 (60.8 per cent).¹ New Brunswick was second among the Atlantic Provinces (48.5 per cent). Nova Scotia (27.5 per cent) and Prince Edward Island (27.1 per cent) were next and ranked seventh and eighth among the provinces. The percentage of the total federal grants for operational expenses used for Program 3 by Newfoundland and New Brunswick again indicates the high priority given to this program by these provinces.

Percentage of Total Federal Grant Used for Program 3

Another indication of the use of federal grants is shown in Table XXVII. The grant used for Program 3 was calculated as a percentage of the total federal grant (operating plus capital grants). New Brunswick spent 23.2 per cent of its total grant for Program 3, and ranked highest among the Canadian Provinces. Newfoundland was second with 12.1 per cent. Nova Scotia and Prince Edward Island used 11.9 and 7.3 per cent respectively. Rank orders of 1, 5, 6, and 9 were obtained for New Brunswick, Newfoundland, Nova Scotia, and Prince Edward Island in comparison with all the Canadian Provinces.

¹The second highest figure was 51.5 per cent for Alberta.

TABLE XXVI

FEDERAL GRANTS PAID ON PROGRAM 3 AS A PERCENTAGE
OF FEDERAL GRANTS (OPERATIONAL)

Provinces	Column 1 Federal Grants 1961-66 Paid for Operating Expenses All Programs ^a	Column 2 Federal Grants Program 3 ^a	Per Cent Column 2 of Column 1	Rank
Newfoundland	\$ 5,242.5	\$ 3,186.5	60.8	1
Prince Edward Island	966.8	261.6	27.1	8
Nova Scotia	6,221.7	1,710.4	27.5	7
New Brunswick	5,878.5	2,849.2	48.5	3
Quebec	56,697.1	21,285.1	37.5	4
Ontario	55,235.1	6,975.5	12.6	10
Manitoba	5,555.1	981.0	17.7	9
Saskatchewan	6,646.2	2,237.3	33.7	6
Alberta	16,722.3	8,606.9	51.5	2
British Columbia	13,820.8	4,855.4	35.1	5

^aIn thousands of dollars.

Source: Department of Labour, Annual Reports (Ottawa: Queen's Printer).

TABLE XXVII
FEDERAL GRANTS PAID ON PROGRAM 3 AS A PERCENTAGE
OF TOTAL FEDERAL GRANTS

Provinces	Column 1 Total Federal Grants Fiscal Years 1961-66 ^a	Column 2 Federal Grants Program 3 ^a	Per Cent Column 2 of Column 1	Rank
Newfoundland	\$ 26,415.7	\$ 3,186.5	12.1	5
Prince Edward Island	3,607.5	261.6	7.3	9
Nova Scotia	14,362.7	1,710.4	11.9	6
New Brunswick	12,277.3	2,849.2	23.2	1
Quebec	139,671.9	21,285.1	15.2	2
Ontario	290,104.7	6,975.5	2.4	10
Manitoba	11,994.3	981.0	8.2	8
Saskatchewan	15,978.8	2,237.3	14.0	3
Alberta	68,340.6	8,606.9	12.6	4
British Columbia	45,718.4	4,855.4	10.6	7

^aIn thousands of dollars.

Based on the data in this section of the survey the following observations are made. Newfoundland used its TVTA grants to a greater extent for Program 3 than did the other Atlantic Provinces. New Brunswick was next, followed by Nova Scotia and Prince Edward Island. As was the case with Program 1, no attempt was made to measure the use of grants for Program 3 relative to the availability of federal funds. Neither was any assessment made of the financial ability of a province to utilize these grants.¹ The criteria used serve only as an indication of the priority set by the province for grants paid under the provisions of the TVTA Agreement.

VII. CHAPTER SUMMARY

In this chapter of the survey Program 3 (Trade and Other Occupational Training) was discussed and conditions under which the program could operate were outlined. Grants paid to the provinces were listed. The percentage of the population in the 15-24 age group was used as a criterion of need for an examination of the use of the grants. Data were analyzed to determine if a relationship existed between per capita income and grants paid for Program 3. The grants paid were calculated on a per person (age 15-24) basis. Finally, comparisons were made to show the grants used for Program 3 as a percentage of grants

¹It is noted again that no maximum financial limit was established for these grants. They were paid on a 50-50 cost-sharing basis for approved programs.

received.

Newfoundland was the highest among the Atlantic Provinces in grants received, followed by New Brunswick, Nova Scotia, and Prince Edward Island.¹

The high percentage of the population in the 15-24 age group in the Atlantic Provinces (compared with the other Canadian Provinces) indicated a greater need for educational services.² The percentage of the 15-24 age group enrolled in Program 3 showed that Newfoundland made extensive use of this program to meet the need and ranked highest among the Atlantic Provinces (second only to Alberta among the Canadian Provinces). New Brunswick and Prince Edward Island made less extensive use of Program 3. Nova Scotia was lowest among the Atlantic Provinces, in the percentage of the 15-24 age group enrolled in this program.

In an effort to relate need to provisions made to meet that need the percentage of the population in the 15-24 age group was compared with the percentage of this age group enrolled in Program 3. Indications were that Newfoundland came closest among the Atlantic Provinces to meeting the need. New Brunswick and Prince Edward Island were

¹Although rank orders of 5, 6, 8, and 10 for claims paid for Newfoundland, New Brunswick, Nova Scotia, and Prince Edward Island do not indicate a high ranking among the Canadian Provinces in the use of grants, it should be noted that the rank orders for population of the 15-24 age group for these provinces are 9, 8, 7, and 10. See Appendix C.

²This is similar to the situation that existed for the 15-19 age group.

next.¹ Again, Nova Scotia, based on the use of data relative to the criterion used, was in fourth position among these provinces.

The chapter concluded with a survey of grants paid to the Atlantic Provinces based on financial criteria. No relationship was found to exist between provincial per capita income and expenditures on Program 3. Federal grants per person in the 15-24 age group showed Newfoundland highest of the Atlantic Provinces, with New Brunswick second.² Prince Edward Island and Nova Scotia were third and fourth. In the percentage of the grants received for operational expenses that were used for Program 3, the Atlantic Provinces were in the following order: Newfoundland, New Brunswick, Nova Scotia, and Prince Edward Island. When the grant used for Program 3 is calculated as a percentage of the total grants received, the only change is that the positions of New Brunswick and Newfoundland are reversed.³

In this chapter a survey of federal grants paid to the Atlantic Provinces for Program 3 was conducted by examining the use made of these grants. The indications, based on the measures used, were that

¹These three provinces were one rank order lower in the percentage of the 15-24 age group enrolled in Program 3 than they were in the percentage of this age group in the population.

²These provinces were in second and third position among all the Canadian Provinces.

³A fact that should not be overlooked at this point is that, despite the extensive use made of Program 3 by Newfoundland, the high percentage of total grants used for capital expenditures (80.2 per cent) could have affected its relative position.

Newfoundland made extensive use of this program.¹ Although New Brunswick did not use the program to the same extent as did Newfoundland, this province also made extensive use of its grants for Program 3. Nova Scotia and Prince Edward Island used the program to a much lesser extent.

In concluding this chapter of the survey, it should be noted that although Program 3 was "open-ended" the unused grants did not accumulate as a credit to the provinces. Thus, in cases where the grant was not used to the maximum needed for educational programs, opportunities lost could not be regained.

¹See George Ernest Martin, "A Survey of Factors Related to Drop-Outs in Grade IX in Newfoundland Central High School in 1961-62" (unpublished Master of education thesis, University of Alberta, Edmonton, 1964). One of the findings of this study was that the "drop-out" rate from grade 9 in schools in Newfoundland was comparatively very high. Many students blame the schools for their dropping out. Although this topic is beyond the limits set for this survey, it is of interest to note the extensive use by Newfoundland of Program 3, which was designed for persons over compulsory attendance school age who had left elementary or secondary school.

CHAPTER VI

MAJOR FINDINGS: CONCLUSIONS: RECOMMENDATIONS FOR FURTHER STUDY

I. INTRODUCTION

In this chapter the major findings of the study are summarized, conclusions are drawn and recommendations for further study are made.

II. PURPOSE AND DESIGN OF THE STUDY

Purpose

The purpose of this study was to conduct a survey of the grants paid to the Atlantic Provinces under the terms of the Technical and Vocational Training Assistance Act. The five year period for the fiscal years ending March 31, 1962, to March 31, 1966, was selected for the survey. The study was concerned with grants for secondary education. Three programs under the Act were selected because of their relevance to education at the secondary school level. The three programs were:

1. Capital Expenditures Program.
2. Program 1: Vocational High School and Technical Training.
3. Program 3: Trade and Other Occupational Training.

Design

This descriptive survey was limited to those programs that received federal grants. Statistics provided by various departments of

the federal government were among the data compiled. Certain limitations were imposed because no figures were available which gave capital costs on a pro-rated basis for the various programs under the Act. Neither were enrollments under Program 3 available by age groups. The survey was concerned with grants provided, not with a qualitative analysis of programs implemented.

Information used to provide perspective for the survey included a discussion of the relationship between education and economic growth, the need for educational programs and facilities, and some financial and political implications for the Atlantic Provinces of federal participation in financing education.

It was considered useful in this survey of federal grants paid to the Atlantic Provinces to examine some measures of interpreting the use of the grants. These measures were discussed in relationship to each program. Brief reference was made to such relationships in the summaries of major findings for each chapter.

III. MAJOR FINDINGS AND CONCLUSIONS

Capital Expenditures Program

The extension of the time limit by the federal government for the cost-sharing ratio at 75 per cent was financially advantageous to the Atlantic Provinces. With the exception of Newfoundland, these provinces had reacted slowly to the Capital Expenditures Program. On the date that the time limit for this cost-sharing ratio was extended, Newfoundland had

qualified for 73.7 per cent of the total capital grants it received for the five year period of this survey. New Brunswick had received 41.8 per cent, Nova Scotia 37.4 per cent and Prince Edward Island 34.3 per cent. Certainly without this extension of the time limit for the 75 per cent cost-sharing by the federal government, the provision of further capital facilities at the 50-50 basis would have cost the governments in each province an additional 25 per cent.

Newfoundland led the Atlantic Provinces in the per cent of allotment used at the 75 per cent ratio with a figure of 100.6 per cent (third highest in Canada). This province obviously considered facilities of sufficient importance to provide them even after the cost-sharing ratio was reduced to 50 per cent. In 1963 the federal government established the allotment of \$480 per 15-19 year old in each province. Newfoundland had received approval for this amount. This figure, which was the highest for all Canadian Provinces, was used by the federal government as the basis for the maximum allotment for cost-sharing at 75 per cent. As of 1963, Newfoundland had made the greatest use of capital grants under the TVTA Act, despite the fact that this province had the lowest per capita income of all the provinces. At the same time the amounts that had been approved per 15-19 year old up to this time for Prince Edward Island, Nova Scotia, and New Brunswick were \$233, \$112, and \$90.

In percentage of the allotment used by the end of the period selected for this study (1961-66), Newfoundland and Prince Edward Island, with figures of 100.6 and 62.0 per cent, again led the Atlantic Provinces

with ranks of 3 and 4 among all Canadian Provinces. Nova Scotia and New Brunswick with 26.4 and 24.9 per cent had ranks of 8 and 9. Three provinces¹ used more than their allotments at the 75 per cent cost-sharing level. The "open-ended" feature of the Capital Expenditures Program made it possible for these provinces to make additional expenditures at the 50-50 cost-sharing ratio until the date of termination of the Act. Newfoundland and Prince Edward Island were also highest among the Atlantic Provinces in the percentage of total grants used for capital expenditures.

Conclusions. In a descriptive survey such as this, one does not expect to be able to draw many specific conclusions. The survey of federal grants paid to the Atlantic Provinces under the TVTA Act has included an examination of the use of these grants. From this information certain observations have been made. Conclusions drawn from these will be stated in the summary of each program that was surveyed.

It is apparent that Newfoundland placed great emphasis on the Capital Expenditures Program. This province ranked high among all Canadian Provinces. It also exceeded all the Atlantic Provinces in grants received, in percentage of allotment used, and in percentage of its total grants that were used for capital expenditure. The provision of facilities

¹ The performance of Newfoundland is especially noteworthy. In percentage of allotment used for capital cost-sharing at the 75 per cent rate this province was exceeded only by the wealthy provinces of Ontario and Alberta with figures of 112.0 and 108.6 per cent respectively.

received such high priority by Newfoundland that it alone, of all the Atlantic Provinces, exceeded its allotment at the 75 per cent cost-sharing formula. Provision of additional capital facilities at the 50-50 ratio indicates exceptional effort for a province that had the lowest per capita income of all the Canadian Provinces.

Another conclusion is that the Atlantic Provinces, with the exception of Newfoundland, reacted slowly in using the capital grants. If the federal government had not extended the 75 per cent cost-sharing beyond the time limit originally imposed, it must be concluded that provision of the same educational facilities would have added a considerably greater burden to the provinces.

Program 1: Vocational High School and Technical Training

Objections to the principle of a maximum payment by the federal government for annual and total grants for Program 1 arose from several sources. It was considered, in some cases, to be a restraint on the expansion of the program, and an impediment in providing vocational education for students at the secondary school level. Nova Scotia and New Brunswick both used their total allotments. Prince Edward Island used 91.9 per cent of its quota. Newfoundland made very limited use of the program with only 7.5 per cent of its allotment used.

Data in the survey showed that the Atlantic Provinces had a greater percentage of their population in the 15-19 age group than the

other provinces.¹ Using the percentage of the population in this age group as a criterion of need, results of the survey showed that New Brunswick and Prince Edward Island led the Atlantic Provinces and ranked high among all Canadian Provinces in the use of federal funds under the TVTA Act to meet this need. Nova Scotia had a low rank (8), and Newfoundland ranked lowest of all the provinces in the percentage of the 15-19 age group enrolled in Program 1.

Another comparison was made between the percentage of the population in the 15-19 age group and the percentage of this age group enrolled in Program 1. The indications again were that Prince Edward Island and New Brunswick stood out among the Atlantic Provinces in the use of federal grants for Program 1 compared with Nova Scotia. Newfoundland was again the lowest of all the provinces.

Another indication of the use of Program 1 was obtained by comparing the percentage of students enrolled in Program 1 with the percentage enrolled in the secondary grades. Results obtained showed New Brunswick highest of the Atlantic Provinces followed by Prince Edward Island, Nova Scotia and Newfoundland.

The rank orders of the Canadian Provinces in earned income per capita were compared with those of the percentage of the 15-19 age group

¹Rank orders in comparison with other Canadian Provinces were 1, 5, 4, and 2.5 for Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick. Quebec also had a rank order of 2.5.

enrolled in Program 1. A positive correlation¹ was obtained. The implications are that, generally speaking, the wealthier provinces made greater use of funds for Program 1. New Brunswick and Prince Edward Island were notable exceptions. Both ranked low in earned income per capita and comparatively high among the Canadian Provinces in the percentage of the 15-19 age group enrolled in Program 1.

The survey of federal grants for Program 1 was concluded with an examination of the grants paid per person in the 15-19 age group and the percentages of grants for operational expenditures and of total grants that were used for Program 1. Prince Edward Island was first among the Atlantic Provinces in all three of these measures. New Brunswick was second in two, and third in the percentage of expenditures used for Program 1. Nova Scotia was second in this measure, and third in the other two, while Newfoundland was in fourth position in the three criteria used. The implication from these data is that among the Atlantic Provinces greatest priority was given to Program 1 by Prince Edward Island. New Brunswick, Nova Scotia and Newfoundland follow in that order.

Conclusions. The conclusion, based on a summary of data obtained and analyzed in this section of the survey, is that among the Atlantic Provinces, Prince Edward Island made the greatest use

¹A rank order correlation coefficient of .750 indicated significance at the .02 level of confidence.

of Program 1. New Brunswick was second, with Nova Scotia and Newfoundland in third and fourth position. These conclusions are based on rank orders derived from the use of the program relative to need as measured by the per cent of the 15-19 age group served, and on the relative priority given to the program by the provinces in the use of grants received. Since both Nova Scotia and New Brunswick used their total allotments and Prince Edward Island did not expend its total, it would appear that the allotments were restrictive. This conclusion is further supported by the fact that Prince Edward Island was lowest among the Atlantic Provinces in the percentage of the population in the 15-19 age group.

Program 3: Trade and Other Occupational Training

Under Program 3 the provinces were not restricted by an allotment as they had been for Program 1. Thus, each province was free to use the program under limitations imposed by conditions of the Agreement, provincial desires or needs, and financial ability or willingness to spend 50 per cent of the cost of approved programs. Newfoundland received the largest grant in the Atlantic Provinces followed by New Brunswick, Nova Scotia and Prince Edward Island.

The high percentage of the population in the 15-24 age group in the Atlantic Provinces created greater need, comparatively speaking for educational services. The percentage of the 15-24 age group enrolled in Program 3 indicates how the provinces used this particular program to meet the need. Newfoundland made the greatest use of the program (based

on this criterion) among the Atlantic Provinces. New Brunswick and Prince Edward Island made less extensive use of the program as did Nova Scotia. The latter province was also low in comparison with other provinces, ranking ninth.

The rank orders of the percentage of population in the 15-24 age group were compared with those for the percentage of this age group enrolled in Program 3. This comparison provided a further indication of the use of Program 3 to meet educational need. The Atlantic Provinces were among seven Canadian Provinces ranking lower in the percentage of the age group enrolled in Program 3. The comparison, however, confirms previous indications that Newfoundland, which ranked highest among the Atlantic Provinces in both cases, made the most extensive use of this program. New Brunswick, Prince Edward Island and Nova Scotia followed in that order.

A coefficient of correlation between the rank orders of personal income per capita and percentage of 15-19 age group enrolled in Program 3 showed no significant relationship between per capita income and use of Program 3.

Calculations of the federal grants for each province for Program 3 as a grant per person, in the 15-24 age group, as a percentage of grants for operating expenses, and as a percentage of total grants paid produced the following results. Newfoundland was first among the Atlantic Provinces in the first two and second in the third. In the third of the above criteria New Brunswick was first, and second in the other

two.¹ Calculations in this section of Chapter V clearly indicated that the highest priority among the Atlantic Provinces, based on the use of grants received, was given to Program 3 by Newfoundland. New Brunswick was next highest, followed by Nova Scotia and Prince Edward Island.

Conclusions. A survey of federal grants paid to the Atlantic Provinces for Program 3 included an examination of the following criteria for each province; total grants paid; the need as measured by the population in the 15-24 age group; the percentage of this age group enrolled in Program 3 as a means of meeting the need; the relationship between personal income per capita and the use of this program; the grant paid per person age 15-24; and the grants paid for Program 3 as a percentage of the operating grant and also of the total grants. From this information certain conclusions seem justified. Newfoundland stood out conspicuously among the Atlantic Provinces in the use of Program 3. New Brunswick was second in the use of this program, followed by Nova Scotia and Prince Edward Island.

No relationship was found to exist between personal income per capita and the use of Program 3. It may be concluded from this observation that it might have been possible for some Atlantic Provinces to make more extensive use of Program 3. This was an "open-ended" program. Some of

¹Newfoundland was highest among all the provinces in the federal grant for Program 3 as a percentage of operating grants. New Brunswick was highest in the federal grant as a percentage of total grants paid.

the Atlantic Provinces had found the maximum allocation of Program 1 restrictive. It would seem logical to assume that greater use could have been made of Program 3 to meet some of these perceived educational needs and to overcome the limitations of Program 1.

IV. GENERAL OBSERVATIONS AND CONCLUSIONS

The purpose of this study was to survey certain of the grants paid to the Atlantic Provinces under the terms of the TVTA Act. The Capital Expenditures Program, Program 1, and Program 3 were selected because of their relevance to secondary education. The grants received by the provinces for each program were listed, and various methods were chosen to interpret their use. The methods used, where applicable, included the following: the total grants paid; the percentage of allotment used; the use of the percentage of the population in a specified age group as an indicator of the need; the use of the percentage of this age group enrolled in a program as an indication of the use of the program to meet the need; and the relationship between personal income per capita and the use of the programs. Finally, the grants paid were expressed in three ways; as a grant per person in the relevant age group, as a percentage of operating costs, and as a percentage of the total grants paid. Rank orders were used for comparisons. Emphasis was placed on the fact that all interpretation of data and conclusions drawn were based on the criteria established.

Chapter summaries have been provided, and some conclusions

stated. A brief general summary, and statement of conclusions provides a broad overview of the survey. It may be recalled that Newfoundland made the most extensive use of the Capital Expenditures Program and Program 3, and made the least use of Program 1. Prince Edward Island led the Atlantic Provinces in the use of Program 1, was in second position in capital expenditures, but was in fourth place in the use of Program 3. New Brunswick was second in Program 1 and Program 3. Nova Scotia was in third position in all the measures used. Although these data are relevant to the criteria established, care should be used in interpretation. No qualitative analysis was attempted, nor was any cost-quality approach involved.

It is obvious from the study, however, that the Atlantic Provinces certainly did not use all the grants that were available to them. They were not alone in this respect. Generally speaking, the "have-not" provinces did not receive benefits comparable to the "haves". The fact that the Atlantic Provinces, especially, in view of their economic situation did not utilize a larger share of the federal grants leads one to conclude that, whatever the reason, this was a serious economic and educational loss. A summary of the federal grants paid to the Atlantic Provinces is shown in Table XXVIII. Comparisons are made with other Canadian Provinces. This table provides a comprehensive overview of the grants paid. It also gives an indication of the priority that the provinces placed on the programs studied in this survey. Newfoundland was highest of the Canadian Provinces in the percentage of

TABLE XXVIII

SUMMARY-FEDERAL GRANTS PAID FOR CAPITAL EXPENDITURES, PROGRAM 1,
PROGRAM 3, AS A PERCENTAGE OF TOTAL FEDERAL GRANTS

Provinces	Column (1) Total Federal Grants Paid Under TVTA Act ^a	Column (2) Capital Grants Paid ^b	Percent Column (2) of Column (1)	Rank	Column (3) Total Capital Program 1, Program 3 ^a	Percent Column (3) of Column (1)	Rank
Newfoundland	\$ 26,415.7	\$ 21,173.2	80.2	2	\$ 24,401.4	92.4	1
Prince Edward Island	3,607.5	2,640.7	73.2	4	3,118.8	86.5	3
Nova Scotia	14,362.7	8,141.0	56.7	8	10,610.2	73.9	9
New Brunswick	12,277.3	6,398.8	52.1	10	9,905.7	80.7	6
Quebec	139,671.9	82,974.8	59.4	6	106,950.9	76.6	8
Ontario	290,104.7	234,869.6	81.0	1	246,032.9	84.8	4
Manitoba	11,994.3	6,439.2	53.7	9	8,228.5	68.8	10
Saskatchewan	15,978.8	9,332.6	58.4	7	12,418.3	77.7	7
Alberta	68,340.6	51,618.3	75.5	3	61,293.4	89.7	2
British Columbia	45,718.4	31,897.7	69.8	5	37,936.9	83.0	5

^aIn thousands of dollars.^bGrants paid are totals for fiscal years ending March 31, 1962 to March 31, 1966, and in thousands of dollars.

Source: Compiled from previous tables.

its total grant that was used for these three programs. Prince Edward Island was second. New Brunswick was third and Nova Scotia fourth.¹ Data shown in this table lead to the conclusion that the programs chosen for this survey occupied a pre-eminent position among the provinces in priorities established in the expenditure of grants available under the TVTA Act.

Grants received from the federal government were used to reimburse the provinces for expenditures incurred for programs under the TVTA Act. These grants were variable (matching) grants, which meant cost-sharing by the province according to conditions specified by the Agreement under the terms of the TVTA Act. Thus, no consideration was given under this Act to the financial ability of the provinces to obtain the grants. In Chapter IV and V, enrollments in Program 1 and Program 3 were compared with personal income per capita.²

The amount of the federal grants received reflected provincial expenditures incurred. Table XXIX provides a summary of the federal grants paid. Per Capita grants of \$53.29, \$29.82, \$16.57, and \$14.40 for Newfoundland, Prince Edward Island, New Brunswick and Nova Scotia indicate

¹Ranks among the Canadian Provinces for Newfoundland, Prince Edward Island, New Brunswick and Nova Scotia were 1, 3, 6, and 9.

²This is one measure of provincial financial ability.

TABLE XXIX

SUMMARY--FEDERAL GRANTS PAID FOR CAPITAL
EXPENDITURES, PROGRAM 1, PROGRAM 3
AS A PER CAPITA EXPENDITURE

Provinces	Population 1961 Census ^a	Total Grants Paid for Capital, Program 1, Program 3 ^b	Grant Per Capita	Rank
Newfound- land	457.9	\$ 24,401.4	\$53.29	1
Prince Edward Island	104.6	3,118.8	29.82	4
Nova Scotia	737.0	10,610.3	14.40	8
New Brunswick	597.9	9,905.7	16.57	7
Quebec	5,259.2	106,950.9	20.34	6
Ontario	6,236.1	246,032.9	39.45	3
Manitoba	921.7	8,228.5	8.93	10
Saskatchewan	925.2	12,418.3	13.42	9
Alberta	1,331.9	61,293.4	46.02	2
British Columbia	1,629.1	37,936.9	23.29	5

^aIn thousands.

^bGrants paid are totals for the fiscal years ending March 31, 1962 to March 31, 1966, and in thousands of dollars.

Source: Compiled from previous tables.

grants paid¹ and imply provincial effort.² The conclusion from the data in this table is that, for the period surveyed, Newfoundland and Prince Edward Island rank high among all Canadian Provinces in the per capita grants received for the programs surveyed and thus, made a greater financial effort to obtain these grants than did most other provinces.

V. RECOMMENDATIONS FOR FURTHER STUDY

In conducting this study many questions were raised that were beyond the limits imposed for the study. Recommendations for further study arise from some of these questions. One of the first is the question of the effectiveness of shared cost grants in regard to equalizing educational opportunity for provinces of low economic ability. Further, why was there a slow response to the utilization of the grants by some provinces? Another closely related question is why did some provinces fail to use grants to the extent that they were available?

¹Rank orders of the Atlantic Provinces among all Canadian Provinces are as follows: Newfoundland 1, Prince Edward Island 4, New Brunswick 7, and Nova Scotia 8.

²It has been suggested by some people that the Atlantic Provinces could not financially support greater use of the grants. Some preliminary work done by the writer in this direction suggests that the Atlantic Provinces ranked low on an Index of Relative Educational Effort. This index represents the school board expenditure per pupil enrolled as a per cent of personal income per person. The rank orders for the Atlantic Provinces, compared with all the Canadian Provinces are as follows: Nova Scotia 6.5, New Brunswick 8, Prince Edward Island 9, and Newfoundland 10. These data are for 1961, the year the TVTA Act became effective. For further details see Financing Education in Canada in the Selected Bibliography.

The Atlantic Provinces were seen to place quite different emphases upon the various programs available under the TVTA Act. This variation among provinces with many regional and economic similarities, raises the question as to whether the responses were based upon a careful assessment of the needs or whether they were measures of expediency?

This question is relevant to two of the Atlantic Provinces in particular. Did Nova Scotia use TVTA funds to maintain unit vocational high schools (while the practice in the rest of the country was to develop comprehensive high schools) as a result of careful planning, or, as a matter of expediency? What plan, if any, led Newfoundland to make limited use of Program 1 but extensive use of Program 3?

On the basis of these questions, which arise from the study, it is suggested that the following investigations be made:

1. An analysis of the effectiveness of shared cost grants in providing equalized educational opportunity,
2. A study of the educational problems which arise from either a slow or a rapid response by the provinces to federal grants for education,
3. An examination of those reasons related to the failure of some provinces to make greater use of the federal funds that were available under the TVTA Act,
4. A study of provincial decision making vis-a-vis federal grants available under the TVTA Act, and
5. A study of the particular reasons for the different emphases placed by the Atlantic Provinces on the different programs offered under the TVTA Act.

BIBLIOGRAPHY

BIBLIOGRAPHICAL ENTRIES

A. BOOKS

- Bargen, Peter Frank. The Legal Status of the Canadian Public School Pupil. Toronto: The MacMillan Company of Canada Limited, 1961.
- Cheal, J. E. Investment in Canadian Youth. Toronto: The MacMillan Company of Canada Limited, 1963.
- Coutts, H. T. and B. E. Walker. G. Fred, The Story of G. Fred McNally. Don Mills: J. M. Dent and Sons (Canada) Limited, 1964.
- Garrett, Henry E. Statistics in Psychology and Education. Fifth edition. New York: David McKay Company Inc., 1962.
- Graham, John F. Fiscal Adjustment and Economic Development: A Case Study of Nova Scotia. Toronto: University of Toronto Press, 1963.
- Harbison, Frederick. "Strategies for Investing in People." John W. Hanson and Cole S. Brembeck (eds.). Education and the Development of Nations. Toronto: Holt, Rinehart and Winston, Inc., 1966.
- Harbison, Frederic and Charles E. Myers. Education, Manpower, and Economic Growth. Toronto: McGraw-Hill Book Company, 1964.
- Mitchell, J. P. "The Current Status of Vocational Education in Canadian Secondary Schools." Peter F. Bargen (ed.). The Canadian Secondary Schools and Manpower Development. Toronto: The Ryerson Press, 1967, 25-42.
- Porter, John. The Vertical Mosaic. Toronto: The University of Toronto Press, 1965.

B. PUBLICATIONS OF THE GOVERNMENT, LEARNED SOCIETIES, AND OTHER ORGANIZATIONS

- "Canadian Manpower Training Program." Ottawa: Training Information Service, Technical and Vocational Training Branch, /n.d./.

Denton, Frank T. An Analysis of Interregional Differences in Manpower Utilization and Earnings. Prepared for the Economic Council of Canada, Staff Study No. 15. Ottawa: Queen's Printer, 1966.

Department of Labour. Annual Reports for the Fiscal Years Ending March 31, 1962 to March 31, 1966. Ottawa: Queen's Printer, 1962-1966.

_____. Technical and Vocational Education in Canada, Vol. 1, No. 1. Ottawa: Information Branch, Technical and Vocational Training Branch, Summer, 1962.

_____. Technical and Vocational Training Agreement. Ottawa: Queen's Printer, 1960.

_____. Vocational Education in Canada. Ottawa: King's Printer, 1949.

Dominion Bureau of Statistics. Enrollment in Vocational Courses, 1965-66 and Number of Completions, Spring, 1965. Technical and Vocational Training Branch, Department of Citizenship and Immigration. Ottawa: Education Division, August, 1966.

_____. Directory of Private Business Colleges and Other Privately Owned Vocational Schools, 1965. Ottawa: Education Division, Vocational Training Section, November, 1966.

_____. 1961 Census of Canada. Ottawa: Queen's Printer.

_____. 1961 Census of Canada, Population Bulletin 1.2-2, Series 1.2, Catalogue 92-542. Ottawa: Queen's Printer.

_____. Preliminary Statistics of Education 1965-66. Ottawa: Education Division, April, 1967.

_____. Survey of Vocational Education and Training, 1961-62, 1962-63. Ottawa: Education Division, December, 1965.

Economic Council of Canada. "Economic Goals for Canada to 1970," First Annual Review. Ottawa: Queen's Printer, 1964.

_____. "Towards Sustained and Balanced Economic Growth," Second Annual Review. Ottawa: Queen's Printer, 1965.

_____. "Prices, Productivity and Employment," Third Annual Review. Ottawa: Queen's Printer, 1966.

- Ford, C. R. "Developments in Canadian Education Services." Address given at Trail, British Columbia, April 23, 1966. Ottawa: Training Information Services, Technical and Vocational Training Branch, 1966. (Mimeographed.)
- Glendenning, Donald. "A Review of Federal Legislation Relating to Technical and Vocational Education in Canada." Ottawa: Technical and Vocational Training Branch, Department of Labour, July, 1965. (Mimeographed.)
- "Heavy Agenda at Council Meeting," Technical and Vocational Education in Canada, Vol. 2, No. 2 (Summer, 1964).
- The House of Commons of Canada. Bill C-105: An Act to Amend the Technical and Vocational Training Assistance Act. Ottawa: Queen's Printer, 1963.
- Jefferson, Thomas. Cited in Education for a Changing World of Work: Report of the Panel of Consultants on Vocational Education. Washington, D.C.: Government Printing Office, 1963.
- National Advisory Council on Technical and Vocational Training. "Minutes of Eleventh Meeting." May 19-20, 1966.
- National Technical and Vocational Training Advisory Council. "Minutes of Tenth Meeting." November 17-18, 1965.
- 9 Elizabeth II. An Act Respecting Technical and Vocational Training Assistance. Ottawa: Queen's Printer, 1961.
- "Technical and Vocational Training Agreement." Ottawa: Training Information Service, Technical and Vocational Training Branch, 1966. (Office consolidation.)
- Wilkinson, Bruce W. Studies in the Economics of Education. Economics and Research Branch, Department of Labour. Ottawa: Queen's Printer, 1966.

C. PERIODICALS

- Andrews, J. H. M. and S. M. Hosein. "What is Your Province's Educational Effort?" School Administration, (September, 1966), 43-46.
- "Canada--Report on Educational Developments, September 22, 1962-June 23, 1963," Canadian Educational and Research Digest, Vol. 3, No. 2. Toronto: Canadian Education Association, 1963.

- Goard, Dean H. "Current Developments in Canadian Technical and Vocational Education," Phi Delta Kappan, Vol. 45, No. 8 (April 1, 1965), 395-400.
- Greiber, C. L. "New Horizons for Trade and Industrial Education," Industrial Arts and Vocational Education, Vol. 52, No. 1 (January, 1963).

D. UNPUBLISHED MATERIALS

- Bryce, Robert C. "The Technical and Vocational Training Assistance Act of 1961-67: An Historical Survey and Documentary Analysis." Unpublished Doctoral dissertation, University of Alberta, Edmonton, 1970.
- Glendenning, Donald. "Impact of Federal Financial Support on Vocational Education in Canada." Unpublished Doctoral dissertation, Indiana University, 1964.
- Hodgson, Ernest Daniel. "The Nature and Purposes of the Public School in the Northwest Territories (1885-1905), Alberta (1905-1963)." Unpublished Doctoral dissertation, University of Alberta, Edmonton, 1964.
- Martin, George Ernest. "A Survey of Factors Related to Drop-Outs in Grade IX in Newfoundland Central High School in 1961-1962." Unpublished Master of Education thesis, University of Alberta, Edmonton, 1964.

SELECTED BIBLIOGRAPHICAL ENTRIES

A. BOOKS

- Bargen, Peter F. (ed.). "The Canadian Secondary Schools and Manpower Development," The Canadian Superintendent, 1966. Toronto: The Ryerson Press, 1967.
- Benson, Charles S. The Economics of Public Education. Cambridge: The Riverside Press, 1961.
- Bowen, William G. Economic Aspects of Education, 3 Essays. New York: McGraw-Hill Book Co. Inc., 1964.
- Clark, Harold F. Cost and Quality in Public Education. Syracuse: Syracuse University Press, 1963.
- Conant, James B. Shaping Educational Policy. Toronto: McGraw-Hill Book Company, 1964.
- DeYoung, Chris A. American Education. Toronto: McGraw-Hill Book Co. Inc., 1960.
- Halsey, A. H., Jean Floud and C. Arnold Anderson. Education, Economy, and Society. New York: The Free Press of Glencoe, Inc., 1961.
- Harbison, Frederick and Charles A. Myers. Manpower and Education. Toronto: McGraw-Hill Book Company, 1965.
- Porter, John. "Social Class and Education." Michael Oliver (ed.). Social Purpose for Canada. Toronto: University of Toronto Press, 1961.
- Rotstien, Abraham (ed.). The Prospect of Change. Proposals for Canada's Future. Toronto: McGraw-Hill Book Company, 1965.
- Schultz, Theodore W. The Economic Value of Education. New York: Columbia University Press, 1964.
- Siegel, Sydney. Non Parametric Statistics for the Behavioral Sciences. Toronto: McGraw-Hill Book Co. Inc., 1956.

Vaizey, John. The Economics of Education. London: Faber and Faber, 1962.

_____ and Michael Debeauvais. "Economic Aspects of Educational Development." A. H. Halsey, Jean Floud and C. Arnold Anderson (eds.). Education, Economy, and Society. New York: The Free Press of Glencoe, Inc., 1961.

Whitehead, A. N. The Aims of Education and Other Essays. New York: MacMillan and Company, 1959.

Ziel, H. R. (ed.). Education and Productive Society. Toronto: W. J. Gage Limited, 1965.

B. PUBLICATIONS OF THE GOVERNMENT, LEARNED SOCIETIES AND OTHER ORGANIZATIONS

Andrews, John H. M. and Alan F. Brown. Composite High Schools in Canada. University of Alberta Monographs in Education, No. 1. Edmonton: The Committee on Educational Research, University of Alberta, 1959.

Barlow, Melvin L. "The Challenge to Vocational Education," Vocational Education, pp. 1-18. Sixty-fourth Yearbook of the National Society for the Study of Education, Part I. Chicago: The University of Chicago Press, 1965.

Bertram, Gordon W. The Contribution of Education to Economic Growth. Prepared for the Economic Council of Canada, Staff Study No. 12. Ottawa: Queen's Printer, June, 1966.

Department of Education of the Province of New Brunswick. Annual Reports for the School Years Ending June 30, 1960-1966. Fredericton: Department of Education, 1961-1967.

_____ of the Province of Newfoundland and Labrador. Annual Reports for the Years Ending March 31, 1960-1966. St. John's: Government of Newfoundland and Labrador, 1961-1967.

_____ of the Province of Nova Scotia. Annual Reports for the Years Ending July 31, 1960-1966. Halifax: Queen's Printer (Province of Nova Scotia), 1961-1967.

- Department of Education of the Province of Prince Edward Island.
Annual Reports for the Fiscal Years Ending March 31, 1960-1966.
 Summerside: Department of Education, 1961-1967.
- Department of Labour. "Vocational Schools' Assistance Agreement,"
 Vocational Education in Canada. Ottawa: King's Printer, 1949.
- Department of Manpower and Immigration. Annual Report for Fiscal Years
 1966-67 to 1968-69. Ottawa: Queen's Printer, 1968-1970.
- _____. Annual Report for the Fiscal Year 1969-70. Ottawa:
 Information Canada, 1971.
- Dominion Bureau of Statistics. Preliminary Statistics of Education,
 1961-62 to 1968-69. Ottawa: Education Division, 1962-1970.
- _____. Preliminary Statistics of Education, 1969-1970. Ottawa:
 Information Canada, April, 1971.
- _____. Survey of Elementary and Secondary Education, 1962-63.
 Ottawa: Education Division, April, 1966.
- _____. Survey of Vocational Education and Training, 1959-60 to
 1968-69. Ottawa: Queen's Printer, 1961-1971.
- Drabble, B. J. Potential Output 1946 to 1970. Prepared for the
 Economic Council of Canada, Staff Study No. 2. Ottawa:
 Queen's Printer, 1964.
- Education for a Changing World of Work. Report of the Panel of
 Consultants on Vocational Education. Washington: Government
 Printing Office, 1963.
- Financing Education in Canada. Ottawa: Research Division, Canadian
 Teacher's Federation, 1965.
- Ford, C. R. "Technical and Vocational Training." A Report to the
 Deputy Minister of Labour, Ottawa, on the activities of the
 Technical and Vocational Training Branch for the Fiscal Year
 Ending March 31, 1962. Ottawa: Department of Labour, 1962.
 (Mimeographed.)
- Glendenning, Donald. "A Review of Federal Legislation Relating to
 Technical and Vocational Education in Canada." Ottawa:
 Programs Branch, Department of Manpower and Immigration,
 October, 1968.

LaZerte, M. E. "Report of the Commissioner on Educational Finance and Related Problems in Administration." Charlottetown: Queen's Printer, 1960.

. School Finance in Canada. Report of the Canadian School Trustees' Association, School Finance Research Committee. February, 1955. Edmonton: Hamley Press Ltd.

Morrison, A. B. "Nova Scotia with Brief References to Other Atlantic Provinces," Composite High Schools in Canada. University of Alberta Monographs in Education, No. 1. Edmonton: The Committee on Educational Research, University of Alberta, 1959.

Price, Fred W. Educational Programs of National Organizations, 1962. Canadian Conference on Education. Ottawa: Mutual Press Ltd., 1962.

Schultz, Theodore W. "Education and Economic Growth." Nelson B. Henry (ed.). Social Forces Influencing American Education, pp. 46-88. Sixtieth Yearbook of the National Society for the Study of Education, Part II. Chicago: University of Chicago Press, 1961.

"Statistical Supplement to the Annual Report of the Department of Education for the School Year Ending June 30, 1963." Published by authority of G. A. Frecker, Minister of Education. St. John's: Government of Newfoundland and Labrador, 1964.

Technical and Vocational Education Training. Recommendations by UNESCO and the International Labor Organisation. Liege, Belgium: The United Nations Educational Scientific and Cultural Organisation, Paris; and the International Labor Organisation, Geneva, 1964.

Venn, Grant (assisted by Theodore J. Marchese, Jr.). "Man, Education and Work," Postsecondary Vocational and Technical Education. Washington: American Council on Education, 1964.

Weisbrod, Burton A. External Benefits of Public Education (an Economic Analysis). Princeton: Industrial Relations Section, Department of Economics, Princeton University.

Wilkinson, Bruce W. Studies in the Economics of Education. Economics and Research Branch, Department of Labour. Ottawa: Queen's Printer, 1966.

C. PERIODICALS

- Adams, Don. "Education and the Wealth of Nations," Phi Delta Kappan, Vol. 47, No. 4 (December, 1965).
- DeWitt, Nicholas. "Investment in Education and Economic Development," Phi Delta Kappan, Vol. 47, No. 4 (December, 1965).
- Schultz, Theodore W. "Investment in Human Capital," American Economic Review, Vol. 51, No. 1 (March, 1961), 1-17.
- Sinclair, Sonja. "Technical and vocational training: are we on the right road?" Canadian Business, Vol. 35, No. 4 (April, 1962).
- "Vocational Education," The C.S.A. Bulletin, Vol. 5, No. 5. Edmonton: Alberta Teachers' Association, June, 1966.

D. UNPUBLISHED MATERIALS

- Bailey, Reginald. "A Report on Present Day Technical Education in Canada with a Reference to the Past and Probable Future Trends." Unpublished Master of Education thesis, University of New Brunswick, Fredericton, 1961.
- Lowe, P. B. "Technical and Vocational Training in Alberta." Unpublished Master of Education thesis, University of Alberta, Edmonton, 1963.
- Rowe, F. W. "A Blue Print for Education." An address given by Dr. F. W. Rowe, Minister of Education for Newfoundland, at the opening of the Annual School Supervisors' Conference. St. John's, Newfoundland, January 6, 1958. (Mimeographed.)
- Verrier, William L. "Investment in Technical and Vocational Education in Canada." Unpublished Master of Arts Thesis, McGill University, Montreal, 1965.
- White, Orville E. "The History of Practical Education Courses in Canadian Secondary Schools." Unpublished Master of Arts thesis, McGill University, Montreal, 1951.

APPENDIX

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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APPENDIX A

FEDERAL ACTS AND REGULATIONS RELATING TO TECHNICAL AND VOCATIONAL EDUCATION

Agricultural Aid Act	(1912-13)
Agricultural Instruction Act	(1913-23)
Technical Education Act	(1919-29)
Unemployment and Agricultural Instruction Act	(1937-39)
Youth Training Act	(1939-42)
War Emergency Training	(1940-46)
Vocational Training Co-ordination Act	(1942-61)
Apprenticeship	(1944-54)
Re-establishment Training	(1945-48)
Vocational Schools Assistance Agreement	(1948-55)
Vocational Training Agreement	(1948-50)
Vocational Correspondence Courses Agreement	(1950-55)
Vocational and Technical Training Agreement No. 2	(1957-61)
Special Vocational Training Projects Agreement	(1959-61)
Technical and Vocational Training Assistance Act	(1961-67)
Technical and Vocational Training Agreement	(1961-67)

Note: Dates given are for original acts or agreements only and do not include extensions.

Source: Donald Ernest Malcolm Glendenning, "Impact of Federal Financial Support on Vocational Education in Canada" (unpublished Doctoral dissertation, Indiana University, 1964), pp. 32 and 78.

FEDERAL ACTS AND REGULATIONS RELATING TO TECHNICAL AND VOCATIONAL EDUCATION

Agricultural Aid Act (1912-13)	1910	1915	1920	1925	1930	1935	1940	1945	1950	1955	1960	1965	1970
Agricultural Instruction Act (1913-23)													
Technical Education Act (1919-29)													
Unemployment & Agricultural Instruction Act (1937-39)													
Youth Training Act (1939-42)													
War Emergency Training (1940-46)													
Vocational Training Co-ordination Act (1942-61)													
Apprenticeship (1944-54)													
Re-establishment Training (1945-48)													
Vocational Schools Assistance Agreement (1948-55)													
Vocational Training Agreement (1948-50)													
Vocational Correspondence Courses Agreement (1950-55)													
Vocational and Technical Training Agreement #2 (1957-61)													
Special Vocational Training Projects Agreement (1959-61)													
Technical and Vocational Training Assistance Act (1961-67)													
Technical and Vocational Training Agreement (1961-67)													
Adult Occupational Training Act (1967-)													

Key: - Act
 - Extension to Act
 - Agreement
 - Extension to Agreement

Notes: Dates given are for original acts or agreements only and do not include extensions.

APPENDIX B

FEDERAL COST SHARING PROVISIONS FOR OPERATIONAL EXPENSES: PROGRAMS
 UNDER THE TECHNICAL AND VOCATIONAL TRAINING ACT AND AGREEMENTS

April 1, 1961 to March 31, 1967

<u>Program</u>	<u>Abbrevi- ation</u>	<u>Federal Government Cost-Sharing</u>
1. Vocational High School Training	(VHS)	Maximum Total Federal Contribution \$15,000,000. Maximum Annual Federal Contribution 3,000,000. Initial payment of 30,000 to each province. Initial payment of 20,000 each to the Yukon and Northwest Territories. The annual allotment for each province was to be determined on the basis of the provincial percentage of the Canadian total of persons, 15 to 19 years of age inclusive, residing in a Province. Maximum sharing was 50% of the provincial costs.
2. Technician Training	(T)	50% of provincial costs of approved projects or programs.
3. Trade and Other Occupational Training	(TO)	50% of provincial costs of approved programs.
4. Training in Co-operation with Industry	(TI)	50% of provincial costs of approved programs. 75% would be paid under certain conditions.
5. Training of the Unemployed	(M)	75% of approved provincial costs except training allowances. Beginning February 1, 1964, 90% of approved provincial training allowances was to be paid to unemployed persons while in training.

<u>Program</u>	<u>Abbrevi- ation</u>	<u>Federal Government Cost-Sharing</u>
6. Training of Disabled Persons	(R)	50% of provincial costs of approved programs.
7. Training of Technical and Vocational Teachers	(TT)	50% of provincial costs of approved programs.
8. Training for Federal Departments and Agencies	(G)	Up to 100% of training costs as approved by the Federal Treasury Board.
9. Student Aid	(SA)	50% of provincial expenditure (loans and grants) based on annual allocation approved by the Minister for assistance to students at University and to nurses-in-training.
10. Manpower Requirements and Training Research		Authorized by Order-in-Council, P.C. 1965-281185, February 4, 1965. 50% of approved provincial expenditures or grants of approved research projects.
<u>Other</u>		
Technical and Vocational Correspondence Courses		50% of courses recommended by an interprovincial committee and approved by the Minister.
Apprenticeship Program		50% of approved provincial costs of operation (continuation of practice existing since 1944).
Capital Expenditures		(1) 75% of approved capital expenditures incurred by a province prior to April 1, 1963; then to revert to 50%. Amended in 1963 to extend cost-sharing at 75% until a maximum amount equal to \$480 for each person in the 15-19 (inclusive) age group as determined by the 1961 Census was reached.

<u>Program</u>	<u>Abbrevi- ation</u>	<u>Federal Government Cost-Sharing</u>
		(2) 50% of approved expenditures in excess of this amount allowed in Section (1), above, (until March 31, 1967).
		(3) 75% of capital expenditures approved for the purchase of machinery and equipment for training and alteration of premises under Program 5.

Sources: Department of Labour, Technical and Vocational Training Agreement (Ottawa: Queen's Printer, 1960).

Department of Labour, Technical and Vocational Education in Canada, Vol. 1, No. 1 (Ottawa: Information Branch, Technical and Vocational Training Branch, Summer, 1962), pp. 5-8.

Department of Labour, Annual Report, 1962 (Ottawa: Training Information Service, Technical and Vocational Training Branch, 1966).

FEDERAL GOVERNMENT SHARING

The various programs in which the federal government agreed to share under the TVTA Act and according to the terms of the Agreements are listed below.

Program 1: Vocational High School Training Program (VHS)

This technical and vocational training offered as part of the high school program, covered programs or courses of regular secondary schools, including technical, vocational or composite high schools. A requirement was that a minimum of 50 per cent of school time of these full-time courses must be devoted to instruction in preparation for an occupation. Co-operative training programs in which students spent a minimum of 50 per cent of their time on the job were also included.

Program 2: Technician Training (T)

This post-high school technician training program was intended to provide training in engineering, science, business, and other fields requiring advanced theoretical and practical training. Courses were designed to stress the understanding and application of mathematical, scientific, technological or other requisite principles. Twenty-four hundred hours of training were required, which could be obtained in full-time day classes. Part-time day or evening classes, or correspondence courses were acceptable provided that they produced comparable qualifications to the day classes. Training was not designed for university credit.

Program 3: Trade and Other Occupational Training (T0)

Trainees for this program were required to be those who had left elementary or secondary school and who were over compulsory school attendance age. The program was given in full-time, part-time, day or evening classes, day or block release, or by correspondence courses. It was designed to assist persons preparing for employment, to provide courses for those interested in upgrading occupational proficiency, or to provide retraining for persons needing or desiring it.

Program 4: Training in Co-operation with Industry (TI)

These projects were developed through co-operation between industry and a province. Upgrading of skills, retraining where necessary, and supervisory training could be included. Such programs were designed to enable workers to meet more effectively the challenge of a changing world of work.

Program 5: Training of Unemployed (M)

Training or retraining of the unemployed to increase their opportunities for employment by improving their education, and their trade, technical or occupational competence was the aim of this program. One of the conditions of eligibility was that the trainee, if under 20 years of age, must have been out of the regular school system for at least twelve months, and also be unemployed.

Program 6: Training of Disabled Persons (R)

An attempt to provide for persons, who, due to continuing

disability, were in need of technical, vocational or professional training was made by the provisions of this program. Training suitable to fit trainees for employment in appropriate occupations was made available in order to overcome the disadvantage of a disability affecting opportunities for employment.

Program 7: Technical and Vocational Teacher Training Program (TT)

Courses under this program were designed and organized for the training or upgrading of technical and vocational teachers, administrators, and supervisors. In order to be eligible, trainees were required to have full occupational competence in their chosen field of instruction. The provinces determined requirements for academic standing of trainees.

Instruction could be provided in full school year terms, special summer school or short courses, or formal in-service training. In regulations under the Agreement, it was stipulated that preference be given to programs established on a permanent or continuing basis and associated with professional teacher training at a university. It was also suggested that emphasis be placed on techniques applicable to the instruction or supervision of adults and to the administration of vocational and technical training programs.

Program 8: Training Program for Federal Departments and Agencies (G)

Program 8 was used to establish classes to provide training for tradesmen or workers for occupations as requested by any department of the Federal Government. Training could also be provided in skilled,

semi-skilled or other occupations for members of the Armed Services.

Program 9: Student Aid (SA)

The granting of financial assistance to students at university and to nurses-in-training was possible under this program. Those eligible for assistance were students registered in a full-time university course leading to a degree (other than theology). Also eligible were nurses-in-training, who, without such assistance, would be unable to undertake or continue their training. The assistance provided under this program could be a grant or a loan or a combination of both.

Program 10: Manpower Requirements and Training Research

This program became available in 1965. The purpose was to stimulate and encourage research projects undertaken in the Province for providing information relating to technical and vocational training and manpower requirements.

Schedule 10 of the Agreement listed projects and related activities which could be undertaken. Included among these were: (1) studies of existing training programs or activities to assess their technical, economic or social effectiveness, and (2) investigations of manpower requirements and changes taking place in labour market requirements.

Technical and Vocational Correspondence Courses

In addition to Programs 1-10, already discussed, the Federal Government also contributed to the provincial cost of preparing, revising, printing and servicing of provincial technical and vocational correspondence

courses. These courses were another means for providing instruction in the theory and practice of occupations. A requirement for federal cost-sharing was that the courses had to be recommended by an interprovincial committee.

Capital Expenditures Program

Under the Capital Expenditures Program, the Federal Government reimbursed the provincial governments for Capital Expenditures for approved training facilities for all programs under the TVTA Act and Apprenticeship Training Agreement. These expenditures could include construction, purchase or alteration, and equipping of facilities.

Originally, a time limit of April 1, 1963, was imposed for federal cost-sharing at 75 per cent. Approved expenditures after that date were to be shareable on a 50-50 basis, with no maximum. Amendments to the Act in 1963 provided for continuation of the 75-25 cost-sharing up to a specified maximum. This maximum federal contribution to a province was an amount equal to \$480 for each person in the 15-19 (inclusive) age group residing in the Province (as determined by the 1961 Census). If this figure was reached before March 31, 1967, (the date of termination of the Act), the federal contribution reverted to 50 per cent of approved Provincial capital expenditures, with no maximum.

Apprenticeship Training Agreement

In addition to federal cost-sharing for the programs under the TVT Agreement, described above, the Federal Government participated in

financing the training of apprentices. This federal financial assistance was provided under the Apprenticeship Training Agreement. The purpose of this Agreement was to encourage and assist in the development of organized training for apprentices in the skilled trades. The training could be in classes or in employment. Apprentices were required to be registered in designated trades.

A new Apprenticeship Training Agreement became effective in 1964, replacing this one, which was first entered into by the Federal Government in 1944. The new Agreement provided for federal financial assistance in the certification of tradesmen, which had not been a shareable cost previously.

APPENDIX C
POPULATION OF CANADIAN PROVINCES

Provinces	1961 Census Population	Rank	15-19 Age Group	Rank ^a	Total 15-24 Age Group	Rank
Newfoundland	457,853	9	43,829	9	74,067	9
Prince Edward Island	104,629	10	8,875	10	15,219	10
Nova Scotia	737,007	7	64,239	7	113,550	7
New Brunswick	597,936	8	53,514	8	90,933	8
Quebec	5,259,211	2	467,426	1	837,059	1
Ontario	6,236,092	1	436,883	2	823,849	2
Manitoba	921,686	6	70,808	6	129,815	6
Saskatchewan	925,181	5	72,864	5	129,860	5
Alberta	1,331,944	4	99,004	4	188,158	4
British Columbia	1,629,082	3	112,653	3	207,883	3
TOTALS			1,430,095		2,610,393	

^aRank orders are the same for 1966.

Source: Dominion Bureau of Statistics, 1961 Census of Canada, Population Bulletin 1.2-2, et passim, (Ottawa: Queen's Printer, August, 1966).

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